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GUNSHOT WOUNDS OF THE ABDOMEN.

BY J. B. MURPHY, M. D.

[Read before the Chicago Pathological Society, Feb. 18.]

CASE I. H. M., age 26, admitted to the Cook County Hospital at 8 p. m., June 16, 1886, suffering from a bullet-wound of abdomen. I saw him at 10 p. m. He was suffering but little from shock; pulse 90; temperature normal; no pain. On examination I found a large bullet-wound half an inch below the umbilicus and an inch to the right of median line. I decided to make laparotomy, and, assisted by Dr. E. W. Lee and the house staff of the hospital, I made the median incision, three and one-half inches long; began examining the small intestine and repairing each wound as it was exposed, by first paring off the ragged edges with a scissors, then inserting a continuous catgut suture in the mucous membrane, then in the peritoneal covering, the first row of sutures being entirely covered by the second. This was continued until the eleven openings were united. I found the bullet had passed through the posterior peritoneal wall close to the pelvis of left kidney. I cleansed the peritoneal cavity with a warm one-half per cent. carbolized water, united the abdominal peritoneum behind with catgut, also the opening made in the anterior peritoneal wall by the bullet; sewed the peritoneum at the incision with a continuous catgut suture; the muscular wall with deep silk suture (interrupted), dressed the parts with iodoform-gauze, then carbolated gauze and borated cotton. The operation lasted two hours; the patient's condition was good after the operation was completed; pulse 110, and of good volume.

The following morning, the house-surgeon reports, "No vomiting, patient slept the greater part of the night, did not complain of pain; pulse 110; temperature 99½° Fah.; no thirst or tympanitis. At 7 p. m., pulse 96; temperature 99° Fah. No vomiting and no pain; says he is hungry." I called at the hospital the following morning and found the patient suddenly died at 7.30 a. m., after spending a quiet and painless night. At 6 a. m. he complained of weakness and said he was fainting.

Autopsy.—Found heart and lungs normal; abdomen filled with blood. The suture in post-peritoneal wall torn through, a large quantity of blood in the retro-peritoneal region, an opening in the left renal artery from which the hæmorrhage came.

The wounds in the intestines were *all completely united, being both air and water tight;* in the majority of these the catgut could not be seen on account of the deposit of reparative material placed about them. There was no evidence of impend-

ing gangrene. Though the patient only lived 36 hours after the operation, the peritoneum had already restored itself, and made the openings impervious. There was no evidence of beginning peritonitis. Cause of death, hæmorrhage from renal artery.

CASE II. G. J., colored, aged 22, admitted to the Cook County Hospital May 24, 1887. He said he had been shot in the abdomen about two hours previous.

On examination, a bullet-wound two inches to right of the median line and an inch above the umbilicus was found; there was dullness in the lower portion of the abdomen. Pulse 66, of good volume; there was some shock. I decided on an exploratory incision. I found the abdomen full of blood. The bullet passed from the abdominal wall into the margin of the liver, passing through its substance almost directly backwards and into the muscles of the back. The hole in the posterior surface of the liver could be felt by passing the hand around the liver. There were no perforations of either stomach or bowels. The abdomen was cleansed, about two pints of blood and clots removed; the hæmorrhage had ceased. The opening made by the bullet in the abdominal wall was closed with catgut suture from the inside, abdominal peritoneum united with catgut suture, and the muscular wall and skin with silk. The wound was dressed antiseptically. The operation lasted 30 minutes. The patient was in good condition.

May 25, there was slight tendency to vomit during the night and some pain, but he feels well this morning. The patient's temperature did not reach 99° F. from that time on, nor did he have a single untoward symptom until June 3, when he complained of pain in the back, and on examination a small swelling just over the supposed position of the bullet was found. He was anæsthetized and the bullet removed, also a small quantity of pus. Convalescence was rapid and the patient was discharged June 13.

CASE III. Geo. S., colored, age 57, a musician (but more of a drunkard) by occupation, was admitted to the Cook County Hospital August 23, 1887, at 3 p. m. He had been shot with a 38-calibre bullet a few hours before, his assailant standing fifteen feet in front of him and a little to the right.

The bullet had entered on a level with the 9th rib, 1½ inches in front of the axillary line. His urine contained no blood. Pulse 78, full and strong; no shock; wound had been probed before the patient came to the hospital. Three hours after the injury, the patient was anæsthetized, and an incision was made three inches long downwards and inwards from the point of entrance of the bullet towards the umbilicus. The bullet was found to have passed through the liver ¾ of an inch from its lower margin; also perforating the transverse colon on its convex portion about one-half of an inch from its beginning, leaving a bridge of intestinal tissue half an inch in length between the points of entrance and exit, then passing into the muscles of the back an inch to the right of the spine. The bridge of intestine between the two openings was cut through, and the edges of the wounds freshened, making an opening about one and one-half inches in length. The mucous and muscular layers were first united by a continuous catgut suture; the peritoneal covering was then sewed over it with a continuous catgut suture; about half a drachm of fæcal matter escaped from the intestine after the opening was enlarged, but none before. The abdomen was cleansed with boric acid solution, and blood-clots removed. The parietal peritoneum was united with continuous catgut suture. The muscular and cutaneous tissues were united by interrupted silk suture. The wound was dressed antiseptically. The operation lasted about three-quarters of an hour. The patient left the operating table in good condition; pulse 90, and of good quality; 7.30 p. m., pulse 78; patient

vomited considerably in the afternoon, and there was some pain in the wound.

August 24, 8 a. m., pulse 72; temperature 99° Fah.; slept considerable; ordered half-ounce doses of brandy every two hours with carbonated water; 7 p. m., pulse 76, temperature 100.2°; vomited until 4 p. m., but not since; feels hungry and thirsty.

August 25, a. m., pulse 74; temperature 98.5°; slept well; no vomiting. From this time on the patient made a rapid recovery.

The first dressing was removed September 2; there was complete primary union. The sutures were taken out and the wound was redressed. The patient was discharged, cured, September 16. I have seen the patient since then and he says he is feeling as well as he ever did.

CASE IV. J. H., aged 26, was admitted to Cook County Hospital on December 1, 1887, at 8.30 a. m., for gunshot wound of the abdomen.

On examination, a wound was discovered on the right side nearly in the axillary line and just below the costal cartilages, apparently penetrating downwards and inwards. The edges of the orifice were blackened and powder-stained, and another opening on the left side, midway between the costal cartilages and the level of the umbilicus, was found. The patient was suffering profoundly from shock. Under ether, and after the patient had walked two miles, the wound on the right side was enlarged, when it was found that the bullet had entered the peritoneal cavity notching the anterior margin of the liver in its downward course. The usual median incision was made, revealing two wounds in the stomach, with extravasation of a small quantity of food into the abdomen, and one in the mesentery, with some bleeding from the latter. These were all carefully sewed up by deep and superficial catgut sutures. The intestines were drawn out and enveloped in warm towels. No wounds were found in them. The peritoneal cavity was thoroughly washed out with warm solutions of boric acid, and the incisions sewed up with silk after securing the peritoneum with catgut. A rubber drainage-tube was passed through the wound on the right side and brought out on the back above the crest of the ilium. The operation lasted 70 minutes, and the patient was very much collapsed.

Through an error, the patient was given two hypodermic injections of one-third grain of morphia, and he showed severe symptoms of opium-poisoning, and did not become conscious until 6 p. m., some eight hours after the operation. The pulse became rapid and more feeble. At 9 p. m. the patient became delirious and died at 11.30 p. m. There is no doubt that the opium contributed somewhat to the unfavorable outcome in this case, as did also the prolonged operation. The autopsy showed the abdomen clean and no blood in it.

Remarks.—There are no positive symptoms of perforation of the stomach or bowels, *i. e.*, if we do not consider the mere fact that a bullet passed through the abdominal cavity *per se* a positive symptom of perforation of the viscera or one of the large vessels. And that we should so consider it is proven by the results of Dr. Parkes' experiments in thirty-eight bullet wounds of the abdomen in dogs, in which only two escaped injury of the stomach and bowels, and in one of those there was considerable hæmorrhage, making only about 2.5 per cent. in which the viscera escaped. Is there any other sign in surgery upon which we act and consider it pathognomonic, where a greater percentage of the cases conform to the law? None that I know of. With this fact staring us in the face, is it not the height of presumption for us to hope that the viscera are not injured after a bullet has traversed the abdomen? Indeed the symptoms of shock were only slight, except in two cases, and in one of them it was due to hæmorrhage.

In case No. 4 there was no vomiting of blood to indicate a wound of the stomach.

At the Ninth International Medical Congress it was suggested by the first speaker on that subject, "that no operation should be performed until such time as fæcal matter appeared at the external wound." This, of course, is absurd, for the food or fæcal material does not escape from the bowel at once after the injury, but it is principally on manipulation that we get an immediate escape, *i. e.*, a primary escape of the contents of the alimentary canal. Nature prevents this escape by an ectropium of the mucous and muscular coats, plugging up the openings temporarily. Dr. Gross states that "extravasation takes place in all cases," but he does not mention the period of time that elapses before it takes place. This is true of the stomach as well as of the bowels, as in case No. 4, not more than a drachm of fluid and food escaped, notwithstanding the fact that the stomach contained a large quantity of food, the two openings would each admit the index finger, and the patient was about for eight hours after the shooting.

In Dr. Parkes' experiments fæcal matter did not appear at the external opening in a single case. This temporary plugging of the opening by the mucous membrane accounts for the tardy appearance of peritonitis in some of the cases of perforating wounds.

When shall we operate and when not?

There are many interesting cases reported of perforating wounds of the abdomen where the patients recover without operation.

Hennen reports a case shot through the abdomen with a ramrod at Badgos, 1812. In the late Rebellion, private Manypenny, as his surgeon records it, "had a ramrod driven plump through his guts." In the Franco-Prussian war, five cases of recovery are reported in one corps, but I cannot find any report of the number of deaths. Larray in a long experience reports only one case of penetrating wound without immediate serious results, and afterwards the bowels were found to be contused. These few remarkable cases are threadbare from being quoted. Abernethy used to shake his head when he had a case of this kind and say, "Nature would have nothing to do with wounds of the small intestines." Bell says, "We announce them as fatal." Sir William McCormac says, in cases of perforation, the median incision should be made as for any other laparotomy and the bowels examined; but, he says, "if a portion of the bowel protrudes from the opening and is not wounded, it should be returned and the opening sewed up." He goes just half way in the right direction and then falters. How can Sir William McCormac tell but that the bowel may be wounded three or six inches from the point of entrance of the bullet? Not any more than he can tell from the examination of the external wound how many perforations there are in the bowels, and that it would be absurd for a man to attempt the latter is thoroughly demonstrated by the excellent and well known experiments of Dr. Charles Theo. Parkes on dogs. He has opened up the field in a most thorough manner and demonstrated to us what can be expected from a bullet passing into the abdomen. *If we will not act it is our fault. Ostrich-like shall we stick our heads in the sand?*

The light which has been thrown on the subject from numerous experiments, and the results following the treatment of cases influenced thereby, puts us in a position where we cannot escape the responsibility from the charge of malpractice when we stand idly by and allow our patient to sink from a septic peritonitis or bleed to death from a wounded vessel. We, as scientific men, should act fearlessly, and, having done so, we will have the consciousness of having fulfilled our whole duty.

All the preparations should be as thoroughly antiseptic as for laparotomies in other cases, *i. e.*, the disinfection of hands, instruments, etc.

The first incision should be to enlarge the opening made by the entrance of the

bullet down to the parietal peritoneum, to be sure that the ball entered the abdominal cavity and that it did not rest on the peritoneum as it did in a case of mine. The second incision should be, in the majority of cases, made in the median line, as it allows greater latitude for the examination of the organs; but, in some cases, it will be impossible to bring the wounded bowel to the opening in the median line. When the wound is outside of the mammary line the incision should be over the entrance of the bullet, and enlarged from that point as may be deemed best—that is, in large, broad-bodied men. In all of my experiments on the cadaver I was able to reach the wounded bowel in the most remote parts of the abdomen from the median incision.

The examination of the organs should be methodical and rapid, beginning with the cæcum and examining the small intestines upwards, being careful to keep the bowels as near their normal position as possible, and not to expose them to the air, repairing each opening as it appears. If the exit-opening in the peritoneum can be found, it should be sewed with silk to prevent a return of pus into the abdominal cavity, should any form in the tract or around the bullet. The number of openings in the bowels may vary greatly, and too much care cannot be exercised to make certain that none escape notice and remain open, causing fatal outcome.

Should the mesentery or omentum be wounded, great care must be exercised in ligating the vessels around the opening by suturing the proximal side of the mesentery with catgut, using a full curved, round needle (Czerny), also removing all blood-clots found between both layers of peritoneum in the mesentery.

Another important point is to look for hæmorrhage in the retro-peritoneal cellular tissue, where the ball makes its exit from the peritoneal cavity. Should there be oozing from this opening, it should be enlarged and the vessels closely examined, and, if injured, or oozing, they should be ligated. Had I done this in my first case, I am quite sure the fatal hæmorrhage would have been avoided. I may also mention a case in the hands of one of my colleagues where fatal hæmorrhage occurred from a vein in the retro-peritoneal cellular tissue, in the neighborhood of the left kidney. The patient died of exsanguination on the third day. Autopsy showed the source of the hæmorrhage; also that the patient had had no peritonitis.

The suture to be used is one that (1) can be easily and rapidly inserted; (2) that will keep the serous surfaces in position for forty-eight hours without causing pressure-atrophy; (3) that no suture that is exposed on the peritoneal side of the bowel shall pass through to the mucous surface; (4) that there shall be as little tension on the suture in the peritoneal layer as possible; (5) that they shall be aseptic; (6) that they shall diminish the calibre of the bowel as little as possible; (7) that serosa shall come in contact with serosa.

The materials which at once suggest themselves to fill all the requirements are chromated and juniper catgut, softened in carbolized water, and sublimated silk (1-1000). I used carbolized catgut in my cases, but since that time the reports of Professor Theo. Kocher's experiments and operations in Berne have convinced me that catgut prepared in carbolized oil or alcoholic solutions of the same are not reliable and are frequently septic. The details of the same can be found in the *Correspondenz Blatt für Schweitzer Aerzte*, and are well worth perusal. The best mode of insertion to supply the above-mentioned requirements are (*a*) in longitudinal and small transverse wounds, a double row of continuous sutures, with a round (Czerny) needle, the first approximating the mucosa, and the second the serosa, the latter covering the first from sight; (*b*) in large transverse wounds the Lembert suture should be used. The first can be inserted very rapidly, and the tension on

the serosa is lessened by the approximation of the mucosa; it will remain unaltered forty-eight hours and not cause pressure-atrophy, and the serosa unites in from twenty-four to thirty-six hours, as shown by experiments on animals, and in my first case. The continuous suture, exposed on the serous surface, is not exposed on the mucous surface, as in Jobert's suture, but it would diminish the calibre of the bowel in transverse wounds, and for that reason, and that only, is Lembert's suture used in large transverse wounds.

A portion of the bowel must be excised when more than three-fifths of its calibre is destroyed, otherwise there will be a stricture at that point. This can readily be accomplished by invagination with a rubber supporter in the intussusceptum, as suggested by Dr. N. Senn, and a continuous suture approximating the serosa in its entire circumference. This may be further supported by the plastic operation on the omentum to support the bowel in this position and insure adhesions (Dr. Senn). When there are two large openings which can be approximated and leave a fistula, allowing the contents of the bowel to pass through the fistula and the loop of bowel to be retired (if the loop is short, that is, less than four feet in animals), the openings should be approximated by Dr. Senn's bone-tablets, or by the suturing process suggested by one of the surgeons in the late Rebellion. Dr. Reybard's wood-plates may be used and the opening approximated to the abdominal parietes. The danger when the bone and wood plates are used is that they cause pressure-atrophy. These advantages are (1) the rapidity with which they can be inserted, Dr. Senn claiming that he can close the opening in ten minutes; (2) the certainty with which they approximate the serous surfaces and retain them in their position.

Toilet.—The blood-clots and escaped contents of the viscera should be removed with a sponge; the abdomen should be washed out with a solution of boric acid until such time as it returns clean from the external wound; the bowel should be replaced as near the normal position as possible, and the omentum spread over the bowel. If it be feared that there is still remaining foreign matter, it would be better to put in a Mikulicz drainage-tube than to lose much time in trying to cleanse the abdomen and thus producing a great degree of shock from which the patient could not rally. *Above all things, profound shock should be avoided.*

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OPHTHALMIA NEONATORUM OR PURULENT OPHTHALMIA OF THE NEW-BORN.

BY ROBERT TILLEY, M. D.

[A Clinical Lecture Delivered at St. Luke's Hospital.]

The technical name employed to designate the affection that I wish to discuss with you this afternoon, gives you no adequate conception of its importance. In order to comprehend its importance it is necessary to try and form an idea of the extent to which it prevails and the ravages which it leaves in its tracks.

Several years ago the question of prophylaxis of this affection was studied by several of the profession, more especially the Germans, and to Professor Credé, whose name is, or certainly will become, familiar to you in the study of obstetrics, belongs the honor of presenting the most efficient method. It was shown that in the general hospital in which he labored, in round numbers one case of ophthalmia neonatorum occurred in ten births—ten per centum. Now, men and women are much the same the world over, and given a population equally dense to the one in which Professor Credé made his observations, we may expect pretty nearly the same results. As a matter of fact, I remember a report several years ago from the Maternity Hospital of New York, in which the number

of cases of ophthalmia neonatorum was given as practically the same as that recorded by the German professor—10, 10.5, 11 per centum. This, however, was previous to the adoption of the prophylactic measures worked out by Credé. I shall refer to these measures later.

But you are, perhaps, ready to exclaim, "Yes; but that is in hospital cases, and consequently come from the poorer people." Let me remind you, however, that the affection to which this ophthalmia of the newborn owes its origin, is no respecter of persons, and is by no means confined to the poor. It will certainly make its appearance in your own practice unless you are very much more punctilious and observant than your confrères, and even then you will encounter it in the experience of others. There is, however, no possibility of ascertaining the proportion of cases in which it occurs in private practice.

But whilst it is impossible to ascertain the percentage of cases in private practice, if we study it from another standpoint we shall be convinced that it is not infrequent. Magnus, of Breslau, says that in the blind asylum under his charge, I forget now in what year, thirty-four per centum of all the blind in the asylum were blind from ophthalmia neonatorum. He is careful to add, however, that the inmates of the institution are largely young people, and such a percentage could not exist if we take into consideration the whole of those afflicted with blindness. His percentage of blind, however, from purulent ophthalmia, is not unique at all; a percentage still higher has been recorded both in England and Russia, as well as other countries.

In his excellent work, "Die Blindheit, ihre Entstehung und ihre Verhütung," Dr. Magnus has collated 2,528 cases of total blindness recorded by excellent observers in Germany—Schmidt, Rimpler, Uhthoff, Stolte, Hirschberg, Landesberg, himself and others. He has presented these in graphic form, which I have reproduced for you; and of all the affections causing total blindness, ophthalmia neonatorum takes the precedence in its destructive influence on the eyes, the proportion being 10.87 per centum; that is to say, that out of ten blind persons, one, at least, was blind from purulent ophthalmia of the new-born. History repeats itself, gentlemen, and what is true in Germany will have its counterpart here in America. As a matter of fact, according to the census of America of 1880, out of ten thousand individuals there were 9.73 blind, whilst a carefully made compilation of Germany gives in ten thousand inhabitants only 8.79. Accordingly, in round numbers, we may be said to have in America 50,000, blind; and it would be fair to conclude that ten per cent of this 50,000, or 5,000, are blind from purulent ophthalmia of infancy. This number, however, it must be remembered, takes no account whatever of those who have been afflicted with the disease and have been cured, or simply deformed with leucoma or afflicted with the simple loss of one eye only; it takes cognizance only of those who are incurably blind. There is yet another idea in connection with this class of cases which will not fail to impress you with its importance, namely, the occurrence of blindness at this early age means the total destruction of the most active avenue of knowledge. Blindness at forty to sixty is a dire calamity, but blindness from infancy, who or what can compensate for it?

This disease usually reveals itself from twelve to forty-eight hours after delivery. You will readily see, however, that the rapidity of its manifestation will depend on several conditions. If the labor is a tedious one, and the head remains a long time in the vaginal canal, its manifestation after complete delivery will probably be earlier.

Nor must we forget that in all probability the stage in which the corresponding affection exists in the mother will probably contribute largely to the time of its development as well as to the virulence of its

form. One of its first symptoms is photophobia; then redness and swelling of the conjunctiva; serous and purulent discharge. The purulent discharge is frequently very abundant and the swelling sometimes so extensive that the upper lid extends considerably over the edge of the lower one. It is true, the affection in infants is frequently less violent than the corresponding affection in adults. Yet the number of blind referred to this cause shows that it is frequently severe enough in infants. When it results in blindness it is frequently associated with leucoma, or a milk-white condition of the cornea, together with more or less destructive changes in the deeper structures of the eye; or the anterior part of the eye becomes staphylomatous.

The most important point to determine previous to a prognosis is to ascertain the condition of the cornea. If it is still clear, and complete control of the case can be obtained, there should as a rule be no serious impairment of vision from this source. It must, however, be remembered that cases of congenital cataract or congenital atrophy of the optic nerve, enjoy no immunity whatever from purulent infection, and hence a case of purulent ophthalmia of the new-born when relieved of the ophthalmia, may reveal signs of congenital cataract or optic-nerve atrophy wholly independent of the affection in question. Should the cornea be cloudy when it is first seen the prognosis must always be very guarded, as, at the best, leucoma of the cornea will probably result.

The treatment of these cases varies greatly with different practitioners. There are some who claim that frequent washing of the eyes, so as to cleanse them from the pus, is the all-important item in the treatment. And such do not hesitate to characterize the use of nitrate of silver, so highly prized by others, as barbarous. Others are content with a saturated solution of boric acid for instillation in the eye, after cleansing. Others use solutions of sulphate of zinc and sulphate of aluminum and potassium; others adhere by preference to the nitrate of silver. Of those who use solutions of nitrate of silver, many differ in opinion widely relative to the strength of solution preferred.

Some of the English ophthamologists use by preference the mitigated nitrate of silver sticks; that is, nitrate of silver and nitrate of potassium in various proportions. Personally, I give the preference to a solution of nitrate silver of about 20 to 30 or even 40 per centum of nitrate silver in distilled water. In using these strong solutions, however, great care must be taken to protect the cornea, and any excess of the silver nitrate solution should be immediately washed away. I prefer to apply it with a little cotton-wool on the end of a probe—I do not use a brush. Once in twenty-four hours is sufficently frequent for such applications, but meanwhile the eyes should be kept scrupulously clean. Cleanliness can be secured only by very frequent washing out of the cul-de-sacs. The swelling and discharge diminish greatly in the first twenty-four hours. Immediately after the application there is quite an abundant exudation of serum, and the lids should be opened to allow its escape. The application of a little vaseline to the edges of the lids is serviceable to prevent the edges from adhering to each other. When they are adherent, however. the application of a little warm water soon overcomes the difficulty. I cannot too urgently caution you against the danger of allowing any of the secretion to come in contact with your own eyes, and you in your turn must be equally cautious in warning those who have charge of an infant so afflicted.

The little one that illustrates this affection for you to-day was not afflicted with a very violent form. It evidently was not observed or recognized as such until about the fifth day after delivery. I did not see it until the eighth day. That was about twelve days ago, and whilst the pus rolled out from between the eyelids when I first

saw it, there is now little or no extra secretion. There remains, however, still a hyperæmia of the conjunctiva and I will now apply again the nitrate of silver solution. I take my position immediately opposite the nurse; the child is held on its back in her lap and its head between my knees; the lids are readily everted and the superior border of the upper and lower border of the lower tarsal cartilages brought together so as to protect the cornea from the solution of nitrate of silver; 20 per centum solution is applied, allowed to remain a few seconds, and then washed off with water and the lids returned to their positions.

The prophylactic measures which I referred to before, as advocated by Professor Credé, are in substance as follows: The eyelids are washed and carefully wiped as early as possible after delivery. The eyelids are then slightly separated, and a single drop of a two per centum solution of nitrate of silver is made to drop from a glass rod on the cornea and allowed to flow equally into the upper and lower conjunctival cul-de-sacs. This constitutes the whole of the prophylactic measures. This method has justly become so popular that it is taught in the midwifery courses. The application, according to report, gives no pain and no prolonged discomfort. Only in those prematurely born does a slight amount of conjunctivitis ensue, and this difficulty disappears in a very brief period. When we learn that it has resulted in the complete obliteration of ophthalmia neonatorum from the maternity wards and its consequent disastrous results in after life, it must be considered well worthy of attention. Any method which will diminish the number of blind of a country 10 per centum must be a great boon to humanity. Were I in general or obstetric practice, I certainly should adopt the method at any rate in all cases in which the mother gave evidence of suspicious leucorrhœa.

I have said that the application of the two per centum solution of nitrate of silver gave rise to little or no discomfort or evil results. There has, however, recently been a case reported in the New York "Medical Record" by Dr. Pomeroy in which troublesome hæmorrhage is said to have occurred, but the practitioner that Dr. Pomeroy refers to cannot be said to have followed Credé's directions. He is said to have dropped the nitrate of silver solution from a spoon onto the baby's eyes. Now, gentlemen, in the first place, a spoon is not an instrument at all adapted for use with nitrate of silver; in the second place, it is practically impossible to drop from a spoon, especially when it has to be guided into a child's eye; and in the third place, Credé recommends the very best thing for the purpose—a glass rod. Now if you ever adopt the method, do not despise the glass rod, and never attempt to do it with a spoon.

There is one more point to which I would call your attention. Gonorrhœal infection is very generally said to be caused by a minute organism, the gonococcus; and of course the ophthalmia of the new-born must be referred to the same influence. Nitrate of silver ranks very high as a germicide, especially with certain germs. This is very interestingly set forth in a book on "Ferments et Maladies," by Duclaux. After studying the culture-fluid of Ravlin, specially devised for the culture of the aspergillus, he says that if to the ideal solution 1-1,600,000 of nitrate of silver be added the further development ceases at once, and that a similar ideal solution that will give three crops of aspergilli in three days and in doing so exhaust itself of practically all its constituents except the excess of water; if the same kind of solution be placed in a silver vessel the seeds of aspergilli when sown on its surface refuse to develope. It may be that the nitrate of silver, whether used as a prophylactic or as a remedy to cure, acts in a similar way.

A CASE OF POISONING BY INGESTION OF ONE GRAIN OF ATROPIA SULPHATE.

BY CASSIUS D. WESCOTT, M. D.

[Read before the Chicago Pathological Society.]

The following case occurred during my service as assistant physician in the Illinois Eastern Hospital for the Insane.

At about half past two o'clock on the afternoon of September 21, 1884, Ole A., a terminal dement with melancholy delusions and suicidal tendencies, became possessed of a bottle of eye-lotion containing one grain of sulphate of atropia, and swallowed the contents without the knowledge of his attendant. The carpenter had gone into the attendant's room, leaving the door open. The bottle containing the poison had been carelessly placed upon the top of a wardrobe; the patient had noticed the poison-label upon it, and knowing where it had been placed, slipped into the room when the carpenter's back was turned, took it down, and swallowed the contents, without being observed. I believe he swallowed the entire contents, for the bottle was found empty. The patient told accurately how much he found in it, and said he took it all. His desire to suicide was well known. Furthermore, there is no reasonable doubt that the solution contained the quantity which had been prescribed—one grain.

At 4.30, or two hours afterwards, he was reported as being in a "sort of a fit," and in my temporary absence, was seen by one of my colleagues, to whom he seemed as if emerging from an epileptic seizure. His pupils were widely dilated, his muscles relaxed, and he was in a condition of stupor.

At my evening round at 7 o'clock, when I called for the eye-lotion, and the empty bottle was brought to me, my attention was called to A. He was lying on the floor, apparently unconscious. When shaken vigorously, he aroused and seemed to realize his surroundings, but could say nothing, though making visible effort. His pupils were largely dilated, with mouth and tongue very dry; extremities cold; legs so much paralyzed that he could not stand; face palid; pulse 120, respiration 12, shallow and irregular. So much time had elapsed since the drug was taken that evacuation of the stomach was deemed useless.

I at once administered one-half grain of sulphate of morphia hypodermatically, and had the patient put in bed and surrounded with blankets and hot-water cans, and brisk friction applied to the legs and trunk. The catheter was passed, and nearly three pints of very light-colored clear urine drawn. At 9 o'clock, the pulse had increased in volume and strength, and the surface was warm. The patient made some inarticulate sounds, but his voice was very husky. If not almost constantly shaken and flagellated, he would drop off into a deep sleep, and respiration would become alarmingly slow—10 or 12 to the minute. The following prescription was given:

R. Tr. digitalis, m. xv.
Potassæ nit., gr. x.
Spirits frumenti, ℥ ii.
M. S. At once.

At 9.30, paralysis had almost entirely disappeared, and he was walked between two attendants until 11 p. m., but the tendency to sleep was so great that occasional flagellations were necessary to keep him awake, even while walking. The pulse was 150; temperature 101° F.; respiration 20 and regular. The tongue had become moist, and the patient would reply to questions in monosyllables, and swear at the attendants when they slapped him unusually hard. He complained of some headache. Digitalis, nitre, and whisky were repeated, and the catheter passed, but only a small quantity of dark-colored

urine was obtained. The patient was then put in bed, and kept awake by occasional flagellations until 1 a. m., when he was intrusted to the care of two attendants, with instructions to keep him moving and give him two drachms of whisky every hour. They reported having walked him until 4 a. m., when they allowed him to rest, and with an occasional shake kept him awake. At the rising hour, 5 a. m., he dressed himself and went to breakfast with the others of his ward. At 6 o'clock, his pupils were largely dilated, but he looked and acted as well as usual, said he had no headache and felt well. As the urine had not been passed voluntarily, the catheter was resorted to, and twelve ounces of very dark-colored urine were drawn. The pupils remained dilated for some days, but otherwise nothing unusual was observed in the patient physically; mentally, he seemed brighter and more cheerful for some weeks.

There was no delirium observed at any time, and only occasional muscular twitchings during the early part of the night. The fit reported by the attendants before the patient was seen by a physician was described as "like an epileptic fit."

The case seems of interest because of the large amount of atropia taken, and the rapidity and completeness of the recovery. Dr. H. P. Loomis, of New York City, reports a case (*Medical Record*, February 28, 1885), in which a similar quantity was taken, with symptoms fully as alarming and more serious after effects, but ultimate recovery. He says he could find only one case (in either English or American journals) in which so large a quantity of the salt was taken and recovery occurred. This case was reported in the *Medical Times and Gazette*, July 6, 1865. I have searched the literature at my command with similar results, and hence feel justified in offering this case for your discussion.

567 West Madison Street.

EDITORIAL.

NATIONAL CONTROL OF MARITIME QUARANTINE.

In a former number of the *Journal and Examiner* attention was drawn to the evident inadequacy of the quarantine arrangements in the harbor of New York. That the statement as to the danger of introduction of cholera and other infectious diseases through that important gateway, not only into New York City but to the entire country, was not an exaggeration of the facts of the case has been fully shown by the reports made to the *New York Academy of Medicine* by a committee of its members, and by a similar report by the *Board of Health* of the State of New York, as well as by the action taken by the mayor of New York. The displacement of one inefficient quarantine commissioner may remove one obstacle in the way of improvement of the service in that port, which is very desirable, as it must be considered the most dangerous, because the largest, avenue of entrance to our country for foreign immigrants and infected goods. The manifest defects in that port have served to draw attention to the existing defects in the quarantine service of our entire country, and it has been emphasized by recent importation of small-pox into San Francisco through Chinese immigration.

In October, 1887, the College of Physicians of Philadelphia appointed a committee to investigate the efficiency of our quarantine arrangements for the exclusion of cholera and other epidemic diseases. That committee has made its report, and has embodied in it a resolution to the effect that "the committee be continued, and be authorized to issue an address to the medical societies of the country," seeking their co-operation in an attempt to secure by concerted action the early adoption of a uniform and efficient quarantine at all of our exposed ports. That address, together with the report, is now

being widely distributed, and may be obtained from the chairman of the committee. For the benefit of those of our readers who may not see the address, and to assist in pushing forward this very desirable movement, we give a brief summary of the main points.

From the "conclusions" reached by the committee it seems that the quarantine facilities at Baltimore and Philadelphia are utterly inadequate. Of the station at New York, the report says: "The buildings are sufficiently large and numerous, and have adequate arrangements for heating and cooking, but they are not divided into a sufficient number of small compartments to permit the strict isolation of the immigrants into small groups." The report further states that the arrangements for water-closets, drainage, washing of clothing, and for bedsteads, chairs, tables, and eating utensils were very defective.

Ample practical demonstration of the inefficiency of the arrangements at New York last fall was shown by the occurrence of cases of cholera among the quarantined immigrants, which developed much later, after the beginning of the quarantine, than the accepted period of incubation of the disease. In addition to this unequivocal evidence, the report claims, and the same statement has been made by others, that the management of the *Alesia's* passengers was worse than the arrangements.

The following summary of the "Address" mentioned is substantially in the words of the original. The weighty objections urged against maritime quarantine are:

1. The alleged failure to keep out the diseases.

2. The alleged injury to maritime trade.

The answer to the first objection is that the existing measures are grossly imperfect, and that an efficient system is theoretically and practically possible. As to the second objection, it is the ship's inhabitants, and, excluding rags, not the cargo, which carry the infection from which protection is sought. Practically, then, the present methods of independent quarantine are not efficient, and they cannot be made so. If placed in charge of a bureau of the National Government, adequate maritime quarantine measures can be established. Such a system should require:

1. That the whole matter be placed under an appropriate department of the General Government.

2. A central bureau of control established at Washington.

3. A sufficient corps of medical officers and assistants, with nurses, sanitary police, laundrymen, engineers, and officers and crews for boarding-tugs, organized at every station.

4. The erection of necessary hospital, and other buildings, wharves, disinfecting apparatus, wash-houses, latrines, etc.

5. These stations must be organized and fully equipped at every port of entry of the coast, in such a way as to meet the requirements of each port in the measure of its commerce and immigration, and the special diseases to which it is most exposed.

6. The cost of the establishment and maintenance of the National quarantine should be provided for by appropriation from the National Treasury, and not from fees exacted from vessels.

The address illustrates and defends these propositions, and closes with the following suggestions addressed to the medical societies of the country: "If your co-operation be agreed upon we would further suggest that, as a body and as individuals, you assist in influencing legislation by the following means:

1. The passage of formal resolutions recognizing the necessity of National control of maritime quarantine, and urgently recommending the matter upon the consideration of your Representatives in Congress.

2. Strenuous efforts to enlist popular sentiment in support of such legislation.

3. The enlistment of the influence of the local medical and public press."

The importance of this subject is so great that it should receive the prompt attention of the profession of the entire country. The interests involved are so universal that it would seem impossible for politicians to make a party issue upon it. Hence, there is reason to hope that if the action of this committee of the College of Physicians of Philadelphia meets with the prompt, hearty, and unanimous support which the matter deserves, it ought to be possible to secure the necessary legislation during the present session of Congress, and to have the bureau in successful operation early enough in the summer of this year to give to our country greater protection from a threatened epidemic of cholera than it possessed when the infected *Alesia* brought the disease to our doors during the past autumn, and the lateness of the season, rather than scientific and efficient quarantine, prevented the scourge from following the great lines of travel, and thus spreading throughout our country again. With the warning signal of danger so clearly shown in the harbor of New York when the cold weather of winter came to rescue the country, it would be criminal negligence that would disregard that warning and leave ports of entry yet open to invasion during the coming season.

THE AMERICAN MEDICAL ASSOCIATION.

The annual meeting of the American Medical Association this year will be held in Cincinnati, on the first Tuesday in May. Special efforts are being made to have it a large and representative meeting of the medical profession of the whole country. The central location of the place of meeting, and the season of the year, as well as the well-known hospitality of the people of Cincinnati, will unite to make the occasion interesting and profitable professionally and enjoyable socially.

If the national societies representing the various specialties be properly represented at the meeting of the American Medical Association, as they should be, and participate in the work of the general sessions, as well as in its different sections, it will prove alike advantageous to the Association and to the special societies by bringing into more direct contact the general practitioner and the specialist, who seem yearly to be drifting further apart. Their interests are mutual and supplemental, and the growing tendency of recent years towards isolation is detrimental to the best interests of both. Whatever cause or causes may have led to such tendency the result is unfortunate.

The general practitioner needs and desires direct personal contact with the specialist whose special course of study and restricted sphere of work have made him deft and an expert adviser in his particular field; the specialist, whose life is devoted to work in that circumscribed field, must recognize the fact that the limitations to which he confines his work, whilst bringing expertness, have a narrowing tendency mentally, as well. Contact with those engaged in the general work of the profession serves to diminish that tendency, and thus such reunions are mutually advantageous. It is not sufficient to gainsay this to allege that the specialist should be well qualified as a general practitioner, besides being an expert specialist. All will admit its truth, but desirable as it is that such should be the case, it is patent to the observing medical man that the tendency of the last few years has been markedly in a different direction, and unless some counterbalancing influence be exerted which shall neutralize that tendency, the result in the near future will likely be mutually unsatisfactory. Since the American Medical Association must be recognized as the organization that is most truly representative of the whole medical profession of our country, and its annual meetings, with general sessions for work which interests the entire profession, and sectional meetings designed for the special

work of the different departments of the profession, furnish ample opportunity for all to meet, it seems most desirable that these opportunities should not be as much neglected as they have been for the last few years. Shall not the next meeting of the Association witness a radical change for the better in that respect?

FRAUDULENT MEDICAL ADVERTISING.

A recent decision rendered in one of the courts in this State, in which the *State Board of Health*, which is charged with execution of the law governing the practice of medicine in the State of Illinois, is concerned, is of more than passing interest to the people of the State.

Under the above law, passed in 1877 by the Legislature, it is claimed that the State Board of Health has been enabled to rid the State of more than 3,000 unqualified practitioners of all kinds, and, what is of quite as much importance, has prevented many others from locating within its limits. Whilst this purification has been accomplished chiefly through the instrumentality of the medical profession, it is the general public that has been most benefited by the change, as was contemplated when the enactment of the law was urged in the interest of the citizens of the State. With commendable fidelity has the State Board of Health discharged the unacceptable duty devolved upon it by the law, and in so wise a manner has it acted as to have led to its imitation by boards organized in other States. Whilst thus struggling against prejudice and opposition, prompted by mercenary motives as manifested in many ways, it has encountered obstacles from a most unexpected source. The law provides that in case of abuse of the license to practice medicine issued by the Board of Health in accordance with its provisions, that board shall have power to revoke the license of such offender. Acting under the authority thus legally conferred upon it the board revoked, for alleged fraudulent medical advertising, the license of one of the most persistent of the medical peripatetics, and drove him from the State. Subsequently he returned, after having exhausted, as is supposed, other fields of his exploits, or been driven therefrom by medical-practice acts in force in them, and he now defies the authority of the board which revoked his license "for unprofessional and dishonorable conduct." In his efforts to prevent the Board of Health from driving him from the State again, he appealed to a court of law, and, in the decision above referred to, the action of the board in revoking his license was declared to be illegal, on the ground, as it is alleged, that the itinerant was not present to make a defense at the time of the revocation of his license. Since it appears to have been shown at the trial that the Board of Health made repeated, but ineffectual, efforts by legal notices, officially served on the offender, to secure his attendance at the meetings of the board when he was informed that his case was to be heard, and he persistently refused to be present at those meetings to make defense of his course, and the board only revoked his license after, seemingly, the most conclusive evidence of the correctness of the charges made against him, it is not clear upon what grounds it was decided that the course of the board had been illegal in revoking the license. If it be the ruling of courts that the board cannot put in execution the provisions of the medical-practice act in the absence of a culprit who refuses to present himself and defend his course, such ruling practically declares the law to be a nullity, and makes the way clear for a new influx of the unqualified and the unscrupulous.

MEDICAL PROGRESS IN ITALY.

The full report given in the November number (1887) of the *Medical Journal and Examiner*, of the last bi-ennial meeting of the Italian Medical Association, showed the strides that that regenerated

country is making to regain the position it once held in the medical world. The letter, in another part of this number of the *Journal*, from our Italian correspondent, regarding medical matters in that country will be found to be interesting in several respects. It recalls the names and works of Italian physicians, surgeons, and teachers, connected in times long past with the old university of Pavia, that are as familiar to the medical students of to-day, and will be to those of future ages, as they were to the pupils of those famous men when they were making the reputation of that university.

It will be a surprise to many, who have not visited that old institution in recent years, to learn of its great awakening, and of the amount of scientific work that is again being done in it, and for the regeneration of Italy. In this work it is prominent, but it does not stand alone in the progress of medical education in that country, as well as in the higher education of Italians generally.

Whilst age has brought to the university accumulations that are of great value in study and in investigation, the disadvantage which attends many years of existence in hospitals, is strikingly shown in our correspondent's report of the rate of mortality at the clinique described. It affords another strong argument against the continuance of the use of hospitals that have long been in existence, and, in this instance, either of incomplete observance of modern antiseptic methods or of the inefficacy of those methods to secure asepsis in buildings long used for hospital purposes.

The brief outline, given by our correspondent, of the new Polyclinic in Rome, bears further evidence of the recent awakening from the lethargic state which characterized it for so many years; and for Rome, to-day, is claimed the credit of publishing the only *daily* medical journal in the world—*La Riforma Medica*, edited by Professor Gætona Rummo.

SOCIETY REPORTS.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF CHICAGO.

REGULAR MEETING, FRIDAY, NOVEMBER 18, 1887.

The President, HENRY T. BYFORD, M. D., in the Chair.

Professor W. W. JAGGARD exhibited

THE NEW NORMAL FORCEPS OF PROFESSOR LAZAREWITCH.

The instrument was presented to the Section on Obstetrics, Ninth International Medical Congress, and its full description can be found in the Transactions now in the printers' hands.

The forceps is straight, *i. e.*, without pelvic curve; the branches parallel; the lock, a tenon fitting into a mortise. Uncharitable critics might regard the instrument as an example of reversion to the original type of forceps. Johann Palfyn, a surgeon of Ghent, presented to the Academy of Paris, in 1723, a forceps, termed Manus Ferræ Palfynianæ, which, in many essential particulars, resembles the instrument devised by Lazarewitch after twenty years' experimentation.

The PRESIDENT presented the following specimens:

HYDRO-SALPINX.

The tube is dilated to a diameter of two and one-half inches. Before being put in alcohol the distended walls of the tube seemed as thin as tissue paper and the whole tumor almost transparent. The uterine end of the tube is pervious. The patient is 38 years old, and was never pregnant. She married fourteen years ago, was taken very sick in a short time, and did not live with her husband afterward. She has not been well since. She married again three years ago, lived with her husband eight months, and dates her severe illness from this marriage. She claims to have had one or two watery discharges from the vagina about the middle of each menstrual

period, preceded by an aggravation of her symptoms and followed by relief. As her pains were on both sides, she concluded that the discharges came from both sides. At the first examination, made soon after a vaginal discharge, I found no tumor; at the second, I easily felt the dilated left tube. As you see, the ovaries are about twice their normal size. The right tube, which was small and imbedded in lymph on the posterior surface of the broad ligament, could not have been removed without tearing the ligament, and was not disturbed. The right ovary could not be pulled out at the incision, and was ligated with some difficulty. The recovery was easy and uninterrupted. The reason for the operation was that she was an invalid, unable to earn her living, and had no one to depend upon.

Dr. NELSON. Was there any suspicion that there had been any specific disease?

The PRESIDENT. From the history, I considered the disease to be of gonorrhœal origin.

FIBRO-SARCOMA OF THE UTERUS AND BROAD LIGAMENT.

This specimen of fibro-sarcoma of the uterus is interesting as having been obtained by one of the most difficult hysterectomies on record. I have the following notes of the case:

Mrs. E. W., American, aged 40, widow, had been married twenty-two years, having borne four children, the oldest twenty years of age, the youngest twelve years old. Four times since the birth of her last child she has miscarried at the third month. Her present illness began six years ago, when she discovered an enlargement in the left inguinal region. There was no pain connected with it, but the last miscarriage, three years ago, was extremely painful. After recovery the pain in the left side subsided. One year ago, the growth began to increase in size, and has grown very rapidly since. There was dull, heavy pain through the pelvis. Two months previous to this time, an exploratory incision was made and a diagnosis given of fibroma of the uterus, with numerous pelvic adhesions. The surgeon did not think its removal practicable. On August 4, I removed the tumor. The operation was begun at 3.15 p. m. and completed at 7.15 p. m. The tumor, including the uterus, was about the size of a man's head. I found the whole anterior surface of the omentum firmly adherent to the abdominal wall above and the tumor beneath, making it almost impossible to get at the tumor, and certainly quite impossible then to make an ordinary exploratory incision. It required about three-quarters of an hour to get the omentum, whose veins were as large as goose-quills, ligated so that I could free it from the surface of the tumor. After enlarging the incision, I found a little space on the right where there were no adhesions. All over the left side the small intestines were adherent, lying flat on the surface, while above and on both sides the colon, throughout its whole length, lay as if plastered upon the tumor. Large blood-vessels could be seen running from the bowel onto the tumor. If I could have lifted the tumor sufficiently to put an elastic ligature about the uterus, I might have quickly enucleated it, but I could not stir it from its bed. It was a sarcoma that did not easily admit of enucleation, and bled profusely from the slightest wound. The patient was anæmic, had already lost some blood, and had been under ether for some time. But I had to go on, for I did not dare to close the incision with the already disintegrated surfaces free in the abdominal cavity. So by ligating dozens of places, cutting between some ligatures and enucleating under others, I finally got the tumor so that I could raise it a very little. Over two hours were thus consumed before I succeeded in freeing it above and tying the ovarian vessels of the left side. I then rapidly enucleated far enough down to apply an elastic ligature, using all of my hæmostatic forceps in stopping bleeding points. But the uterus had grown into the

broad ligament and was firmly attached to the pelvis, so it could not be enucleated out of its vascular surroundings, but had to be ligatured at and against the pelvic brim on the left. The pedicle, as you see, was about the size of a man's thigh and is traversed on one side by the enlarged uterine cavity. It was treated by Hegar's extra-peritoneal method. The patient died forty-three hours after the operation, of exhaustion. The greater extent and vascularity of the adhesions, as compared with fibroma, were well illustrated here. The absence of menorrhagia in the history of the case corresponds with what is more often noticed in sarcoma.

Professor ETHERIDGE: Will you tell us how you freed the colon from the tumor, and whether the bladder was implicated?

The PRESIDENT: The bladder was not implicated. In freeing the colon, I took stitches through the capsule of the tumor and ligated separately the large vessels on the other side and cut between them. In some places I used hæmostatic forceps on the tumor side, in others I enucleated.

Dr. J. SUYDAM KNOX read the following report of three Pelvic Presentations, with Deep Laceration of the Perineum.

The three cases of breech delivery here reported occurred in close sequence in my private practice. Being unusually severe labors, and having certain points in common, they impressed me as being worthy of report. Taken collectively, they suggest discussion as to the management of labors with this presentation.

CASE I. Mrs. W., American, æt. 26, primipara, was taken with slight labor pains 4 a. m., May 7, 1887. At 2 a. m., May 8, Dr. Colton was called and found the breech presenting, S. L. A. As the os was but partially dilated, and the pains extremely irritating, he administered opium and chloral. Rest, with gradual dilatation of the os was thus obtained for the next twenty-four hours, when I first saw the case. Finding the membranes unruptured, and the os still not sufficiently dilated, the breech not being engaged, I advised non-interference and a continuance of the opium per rectum.

At the end of twenty-four hours I was again sent for. Water had been escaping for hours, the breech rested on the perineum, the patient was exhausted by seventy hours' labor, and the fœtal heart could not be heard. The doctor had made long and faithful efforts to assist the delivery, but the body was apparently impacted in the pelvis and would not advance. With great difficulty I succeeded in bringing down a foot, and at length delivered a lifeless twelve-pound boy.

The after-coming head caught in the superior strait and its extraction with forceps caused a laceration of the perineum to the right side of, and beyond, the anal sphincter. The soft parts were so swollen and contused that immediate stitching was deemed unadvisable.

The perineum was partially repaired by granulation during a tedious convalescence of five weeks. Secondary operation will be required.

CASE II. Mrs. M., a stout young Bohemian, æt. 22, fell in labor with her first child the morning of May 13, 1887, Dr. Michelet in charge. The first stage of labor was tedious and extremely painful. The membranes ruptured at the end of twenty hours. For three succeeding hours pains were severe and expulsive, when the patient became exhausted and labor ceased. Dr. Nelson was called in and advised stimulants, quinine, and opium. The patient slept several hours, awoke refreshed, and the pains returned with strength and regularity. Thirty-nine hours from the commencement of the labor, Dr. Nelson was again called in and I was requested to meet him. We found the breech resting on the perineum, the body firmly impacted in the pelvis, and the child dead. Persistent efforts at extraction had been made, leaving the vulva bruised and swollen, and the perineum rigid. The patient having been put under ether at the request of the

others, I engaged a blunt hook in the anterior groin of the fœtus and gradually succeeded in extracting the body. The forceps were then applied to the after-coming head. Its delivery caused a laceration of the perineum through the sphincter, and about one inch up the recto-vaginal septum. The weight of the child was ten pounds.

Under the most disadvantageous circumstances, Dr. Nelson successfully closed the rent, using three silver sutures in the septum, and four in the perineum.

Antiseptic post-partum treatment was adopted, but the patient had septic fever. On the eighth day fæces escaped per vaginam. Examination revealed no union, and the stitches were removed. The patient was four weeks in bed. For two months she was confined to the house. She has but little control of the rectum to-day.

CASE III. Mrs. F., a robust American woman, æt. 36, was confined four years ago, in New York, with her first child. After seventy hours of distressing labor, a dead and mutilated child was instrumentally extracted. I could not learn whether craniotomy was practiced or not. On the morning of June 24, 1887, I was called to attend her in her second labor. I found the vertex presenting high up, L. O. A. The first stage of labor lasted thirty-six hours, when, the os being fully dilated, I ruptured the membranes. Hard expulsive pains succeeded for three hours, when finding the head did not engage, I attempted the high application of the forceps.

The blades were introduced and locked without difficulty, but each attempt at traction caused them to slip backwards over the crown of the child. Owing to the great obliquity of the head, this always occurred in spite of extreme depression of the handles and downward traction. Anæsthesia was then produced, the hand introduced, and podalic version easily accomplished.

The after-coming head became impacted in superior strait, requiring the forceps. Fifteen or twenty minutes passed before it could be disengaged and delivered. By depressing the handles of the forceps between pains, I succeeded in getting some air to the child, and thus finally delivered it alive. Weight of child, twelve pounds.

My best efforts could not save the perineum, which was torn through the anus and one inch up the recto-vaginal septum. After the delivery of the placenta, I repaired the laceration with two deep silver sutures. The upper stitch was inserted on a level with the lower vaginal commissure and passed entirely around the recto-vaginal rent. The second stitch closed the perineum above the sphincter ani. The rectal sphincter not having been repaired, the condition of the patient was similar to that after operation for anal fistula. The stitches were removed on eighth day, finding the perineum healed. The patient was up and about in two weeks, apparently as well as ever. October 13, the rectal tear not fully healed, but sphincter under full control. My impression is, that no further operation will be required.

In reviewing these cases, I was impressed with the danger to the fœtus in delay of delivery after the membranes have ruptured. Until then, breech presentations should not be interfered with, for the dilatation of the os is slowly accomplished, and the membranes should be kept intact as long as possible. This long first stage, however, is apt to exhaust the patient and make her irritable. We thus get spasmodic rigidity of the os tincæ and perineum.

After the rupture of the membranes and the protrusion of the breech into the vaginal canal, the rigid perineum is apt to cause the flexible body and folded limbs to pack in the pelvis, and delivery is retarded. If this retardation continues, tonic uterine contractions are induced and the child dies asphyxiated, or uterine inertia comes on and the fœtus slowly dies from compression. In the cases reported, the large size of the children, and the easy delivery of the after-coming heads, show that impac-

tion was not due to disproportion between the pelvis and the fœtus.

These successive complications I believe are present in some degree in all breech presentations in primiparæ. The novelty of the situation, with its pain and anxious forbodings, tends to make such parturients nervous and irritable. Under ordinary conditions, breach presentations should be severely let alone until the breech has cleared the vulva. The bag of waters can scarcely be left too long unbroken; the folded body best prepares the way for the after-coming head, and, therefore, the extremities should not be brought down. Tractions lead to the extension of the chin and the passing of the arms above the head, and, therefore, ordinarily are unwise and vicious.

In cases, however, like the first two reported, there must be a departure from ordinary methods, to avoid the ill results that followed.

In a prolonged first stage, the resulting irritability of nerve and muscle can largely be avoided by a free use of opium guarded by belladonna. Rest is thus secured; strength conserved; the os tincæ becomes relaxed, and the perineum distensible.

After the rupture of the membranes, the descent of the breech should be encouraged by pressure upon the fundus uteri during each pain. At the same time, two fingers in the vagina depressing the perineum would prevent impaction, and increase the energy of the uterine contractions. Should impaction threaten, anæsthesia should be induced, the feet brought down, and tractions made; always, however, following the descending fœtus with compression of the fundus uteri. This outline of treatment is, of course, to be modified by the idiosyncrasies of the patient, or peculiarities of the case.

Each of the three patients reported was deeply lacerated. Each laceration was treated differently.

Case I was not operated upon. The soft parts were so ædematous and bruised as to forbid expectation of union. I believe this to have been an error of judgment. The œdema soon subsided, there was no sloughing, and partial repair, at least, with much comfort would have followed the closing of the wound. The mere apposition of the parts without union is a great advantage to the patient, as illustrated in Case II.

The latter was far less distressed during the first week of her lying-in, though her laceration was much more grave and no union resulted.

In Cases II and III, both lacerations passed through the sphincter ani, and about an inch up the recto-vaginal septum. In Case II, the whole wound was carefully closed with seven silver sutures. Non-union resulted. Septic fever was, however, present. In Case III, but two sutures were used, one closing the vaginal rent and the other the perineum. The deep anal fissure was left untouched. Good union followed.

I believe these opposite results had their origin in the management of the torn sphincter ani. In such deep lacerations this muscle is a born disunionist, and chafes under the restraint of a stitch. It should be excluded in the closing operation. The end sought is to restore the integrity of the perineum. Even the rent in the recto-vaginal septum, unless extensive, is of less importance.

Dr. D. T. Nelson: Perhaps it would be more appropriate for me to say something later in the discussion, but as I was cognizant of the first part of the history of the case, it may be interesting to give testimony as to the condition of the patient before Dr. Knox saw her and kindly assisted, for I assure you we wanted not only his brains but his muscles. The attending physician and myself had become completely exhausted in attempting to dilate the perineum and cervix and make ready for some one to deliver. I believe I never saw a more rigid perineum; the cervix had dilated fairly well, but slowly and tediously, assisted, I believe, by opiates—chloral had been given by the attending physician before I saw

her. In theory and practice I have no doubt of the importance of aiding dilatation of the perineum when it does not dilate satisfactorily. This was one of those cases, rarely found, in which it was exceedingly difficult, almost impossible, to dilate. Considerable had been accomplished before Dr. Knox saw the patient, and yet I am sure he would be ready to testify that the perineum was not well dilated, and more, that it was not dilatable. It was ruptured before it was dilated. As to the wedging of the fœtus into the pelvis or into the lower strait, it was to me an interesting fact, and I think I have seen it several times before. It ordinarily means the death of the fœtus. Thus wedged in, when dead, the fœtus is, so to speak, a ball of putty which can be crowded by the forces above into a mass against the resisting medium, whatever it may be. Pains had been increased by the manipulations in dilating the perineum, and I think that is an important advantage in many cases of difficult labor, that by attempting to dilate the perineum the pains will be strengthened, just as they are ordinarily in a normal condition of things when the head, or whatever the presenting part is, reaches the perineum. You have the advantage of the reflex muscular contraction, which makes the pains very much more powerful. But we had become exhausted in attempts at dilatation before Dr. Knox saw the patient, so we got very little advantage in that way. What advantages have we gained by the experience? It seems to me the proper place for improvement in treatment of such a case is during pregnancy, or before pregnancy, even, and the question is whether or not we could do anything to make the muscular structure better in quality. It seemed to me one of those cases in which there was, to a large extent, absence of the development of muscular structures in the vagina and perineum which ordinarily follows pregnancy. We are all aware that pregnancy makes a great change in the vagina, vulva, uterus, and ovaries, and it seemed to me that change had not taken place as it should. There had not been the development of the muscular structures that would facilitate the delivery. She was much in the condition, when I first saw her, of a virgin. She was quite fleshy, and I think it is the experience of all of us that these are the patients whose perineums and other structures rupture; they do not dilate as well, perhaps from absence of muscular tissue, perhaps from the presence of fat. As to the restoration of the perineum, I remember well that we discussed the question whether it would be wise to attempt the immediate operation of the restoration of the perineum and other ruptured parts after delivery; my own thought, and I think it was the unanimous belief of those present, was that the woman would be no worse off if the immediate operation was performed, and probably would run less risk of sepsis, though we all doubted the satisfactory union of the parts. I heartily agree with Dr. Knox that, as a general rule, it is not wise for us to try to close the perineum and be thoughtless about the recto-vaginal septum and the sphincter ani. I should decidedly prefer, if I was to operate after another physician, to have the septum closed, and to have the opportunity of closing the sphincter and perineum. I think the first operation should be the closure of the septum. I think it will be found quite difficult to close the recto-vaginal septum, after the perineum and sphincter have been restored. I fully believe that the danger of sepsis and other serious complications are lessened by the immediate operation, even though the parts are so lacerated that we can hardly expect a satisfactory union, and I would do the primary operation unless the patient was so exhausted by the previous delivery as to forbid it.

Professor CHAS. WARRINGTON EARLE: Such difficult breech cases as our attention has been called to this evening are not frequent in my practice. Indeed, when I have seen pelvic presentations terminated before I could reach the case, safely to both

mother and child, it has sometimes occured to me that we exaggerated the dangers of these cases, and I have thought that the ordinary breech case gets along better without some doctors than with them. I think there is no doubt but that the temptation to extract quickly sometimes produces the complications we seek to avoid. The cases presented by Dr. Knox were indeed complicated, and, with his most able advisers, I believe the most judicious treatment was pursued, but I cannot see why episiotomy was not performed. This is an operation which, in my judgment, should not be done frequently or unadvisedly, but it occurs to me that here it would have been justifiable.

Dr. Nelson compares the condition of the child in the cavity of the pelvis to a mass of putty.

With such a condition of things as this—the child dead and the lower parts rigid—why waste time trying to deliver with forceps or anything else; why not perforate at once, reduce the size, and then deliver?

In regard to lacerations, I am an advocate of closing them all. I have never performed the immediate operation on the cervix, but I have witnessed it, and, if performed by a skillful operator, I think it justifiable. Certainly, it is our duty to do the immediate operation if the perineum is ruptured. I once saw Carl Braun's assistant do a craniotomy, in the course of which the cervix, a portion of the vagina, and the perineum were all torn. After the usual antiseptic precautions to the cavity of the uterus, he introduced retractors, and successively closed the rent in the cervix, then in the vagina, and then the perineum, using in all about sixty sutures.

I can easily see how in a small room, and with imperfect facilities, it would be impossible to do such an operation, yet the indications are to thoroughly and antiseptically and immediately close these lacerations.

Dr. D. T. NELSON: I would like to say a few words in reference to some of the points raised which Dr. Knox did not know. As to the use of hot vaginal douches, the hot sitz-bath was not used; it was practically impossible, on account of the absence of conveniences. A hot-water vaginal douche was directed and repeatedly used during the first stage of labor. A word further with regard to the septic conditions; I believe the woman had septic fever, but I believe that antiseptic precautions were fairly used, not as they might be in a hospital, or as they would be in our best private practice. Vaginal douches of an antiseptic type were repeatedly used during the first stage of labor, and after delivery iodoform was constantly thrown into the vagina and over the vulva. As to closure of the perineum by primary operation, and putting in too many stitches, I have had some experience in that direction, and fully believe that putting in a large number of stitches, and closing the parts perfectly, is a desirable thing to do, and I have repeatedly had it succeed most admirably. I never had as bad a result as this one, and the reason is partly explained by the fact that we were working at a decided disadvantage. We did not think it safe to put the patient on the table, where we could have had an opportunity to perform the operation satisfactorily. More than half the stitches were put in by feeling, and not by the eye, and you can judge that they would not be well put in, and accurate coaptation could not be secured. The expectation was not that there would be complete union, but that there would be less sepsis than otherwise, and I think the woman would have had far less chance of life if the operation had not been attempted. As to turning and delivering the child by his feet, I think any gentleman would have found it a difficult task to turn that babe and deliver it. As to dilating the parts before the instruments are put on, it seems easy, and in every other case of breech presentation I ever saw it was exceedingly easy to deliver the patient, but this was so extremely difficult I was very glad to have Dr. Knox present to assist, as well by his fingers as

his valuable head. If I should ever meet another such case, I would be glad to have some gentleman of the society present, and if he can deliver with his fingers, they will be stronger than any that were present on this occasion; I feel sure there are no fingers in this society that could have delivered that breech.

The PRESIDENT: I would like to take exception to one of the main conclusions of the paper, that it is not well to try to do too much in closing the perineum. In those cases in which I have put in the most stitches the union has been the most complete. I recently put in twelve stitches and got complete union in a laceration extending into, but not through, the sphincter ani. In another, extending through the sphincter ani, I obtained complete union by using fifteen stitches. I preserved a piece of the perineal centre, which was hanging out like the end of a finger, by stitching it back with buried juniper catgut. The reasons for failure are that the operation is poorly done, or imperfectly cared for afterwards. If the operator uses carbolized catgut, he will be sure to have occasional failures. I use buried sutures of juniper catgut in the recto-vaginal septum, instead of rectal sutures, and then stitch the vaginal edges, exactly as they belong, with the same material. The lowest external stitch should be taken low down and through the ends of the torn sphincter, as recommended by Emmet. Either this or the next one should pass deep enough into the perineal body and near enough to the rectal mucous membrane to sustain the rectal pressure or traction as far as possible. If these stitches be of silkworm gut or silver, they will not give way, when properly and aseptically taken. I think the mistake is sometimes made of cutting off too many irregularities, instead of fitting them together. After the parts are united, we should, if the rectum has been lacerated, bind up the bowels for several days, and at first use plain vaginal douches, not carbolized ones, from three to five times in twenty-four hours. Beginning with the third and fourth day, carbolized douches should be employed. If we take all this care, the same as for the secondary operation, we will, unless the parts have been too badly bruised, have the same success.

Dr. J. S. KNOX: In regard to the infection of these patients, Dr. Cotton told me his patient had no septic fever or rise of temperature, and he thought convalescence was delayed on account of the laceration of the parts. Dr. Michelet's patient had septic fever. The stitches were removed on the eighth day, and union was found not to have taken place. In my own case, the woman made a prompt recovery. I kept her in bed two weeks, because I had stitched the perineum; there was no rise of temperature, no signs of sepsis; she had a normal lying-in. I introduced my hand into the uterus and turned the child. I used no intra-uterine douche, but used an antiseptic vaginal douche, two or three times a day. In reply to Dr. Earle—the physicians were not trying to save the perineum, as the lacerations were not at all expected. I have repeatedly applied the forceps to the after-coming head in breech presentations, and always expect to deliver the head without laceration of the perineum. It has been my experience that when a delivery of the after-coming head is attempted instrumentally, it comes suddenly and unexpectedly; you make strong traction, and the head flies upon the perineum and out in the world in a moment, and I think the lacerations of the perineum occurred in this sudden popping-out, so to speak, of the after-coming head. Dr. Byford speaks of keeping the bowels bound up after operations on the perineum. I met with greatest success in keeping the bowels open; my inflexible rule is, after stitching the perineum, to administer to my patients, from the start, Friedrichshall or Hunyadi water. I like them to have a stool once in twenty-four hours without the use of an enæma; I also like my patients

to pass urine naturally, and then, as soon as the patient has urinated, to douch out the vagina and the wound. I think it is not judicious to keep the bowels constipated. In regard to Dr. Nelson's criticism of my conclusion about too much being attempted, I spoke only of this one case. I believe that all lacerations should be closed, if possible, and that every care should be taken to perform an immediate and complete operation. When, however, the conditions are such that one cannot make a complete operation, I should much prefer to close the perineum, leaving the sphincter-ani muscle unclosed, to even leave the septum not stitched, rather than the perineum, because I believe that the results of a laceration of the perineum, unrepaired at the time and left for a secondary operation, are quite serious. There seems to be a readjustment of all the organs of the pelvis; the position of the bladder, rectum, and uterus are not the same as before, and the longer the secondary operation is delayed the greater are the displacements. In this operation, I said too much was attempted, because an appropriate and satisfactory operation could not be done under the circumstances.

All the surroundings were such that all operations were done with a great deal of difficulty; in fact, Dr. Nelson made half his stitches by touch, and not by sight. In my own case, I was alone, with no assistant but an ignorant Irish nurse, and with a hysterical patient. In the case operated upon by Dr. Nelson, I think, if he had used less skill, he would have had a good perineum. Speaking from my personal experience, I think that manual dilatation of the os in labor is injurious; I believe most thoroughly in the septic inoculation of the uterus by attempts to dilate the os in labor, even before the membranes are ruptured. When the os has become rigid, I occasionally introduce two fingers and try to retain what dilatation has been accomplished by pains; but the dilatation of the os, I think, is a vicious practice in ninety-nine cases out of one hundred, but by dilating the perineum when it is rigid I have saved a rupture, in breech as well as vertex presentations. If impaction of the fœtus and laceration is accomplished largely by rigid perineums, I think it is proper for the physician to do this operation, and I know that it does bring on more regular pains.

Professor EARLE asked if these women were subjected to a long hot sitz-bath as a means of assisting dilatation.

Dr. KNOX: They were not. There are many things that have suggested themselves to me in connection with these cases. I believe that if hot vaginal douches, hot sitz-baths, and hot applications over the abdomen had been used, they would have been more satisfactory.

Dr. BAYARD HOLMES read a paper entitled, "A Primary Myoma of the Broad Ligament and a Table of Seventeen Collected Cases," which appeared in the February number of this journal.

BALTIMORE GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

T. A. ASHBY, M. D., read a paper on "Syphilis of the Endometrium."

There are few, if any, of the organs or tissues of the body which are not involved in one way or another in the various manifestations of syphilis, when once the virus of this malady becomes a constitutional infection.

That the syphilitic poison has predilections for certain organs and tissues is a well-known fact. The manifestations of this disease are largely influenced by bodily conditions and constitutional states. Thus, anæmia, chlorosis, and general debility favor the outbreak of syphilitic lesions which might have pursued a milder course, or been kept in total abeyance, by a condition of health. Pregnancy is supposed to exercise the same influence upon the syphilitic woman. The character of this influence is modified largely by the age of the syphilis. Thus, a woman who contracts

syphilis during pregnancy is affected differently from one who contracts the disease prior to conception. In the first case the predisposition to premature delivery is far less potent than in the second.

Secondary syphilis is almost sure to manifest itself in the syphilitic woman when the disease is contracted prior to conception or during the act of conception. Ohlshausen mentions that among 657 syphilitic women, 231 miscarried, while 426 were delivered at term of living and dead children. Parvin states that at Lourcine 260 aborted out of 416 pregnant syphilitic women.

Abortions induced through syphilitic influence may be brought about either through maternal or fœtal infection. A woman previously inoculated with syphilis will abort more readily than one who contracts the disease during pregnancy, and the danger of abortion seems to be in ratio to the period of infection. Thus, contagion communicated at the time of fecundation is more likely to lead to a separation than where the poison has been introduced after the fourth month. Syphilis may be communicated through the father to the fœtus, which may or may not result in its death and separation, and the mother may escape infection. On the other hand the mothers have become infected through the fœtus. A woman may have secondary syphilis and pass through the entire term of pregnancy without any manifestation of the disease in connection with the reproductive organs, but this condition of exemption may be regarded as an exception to the general rule that syphilitic women are almost sure to abort.

When pregnancy becomes established in the syphilitic subject it invites a manifestation of the disease at the point of contact of the fœtal and maternal tissues. The decidua becomes involved in a condition known as *syphiloma of the decidua*, and the placenta is so modified in its structure and mode of development as to constitute a condition recognized as placental syphilis. The extent of these changes which take place in the decidua and placenta indicates the result of the syphilitic involvement. Separation may or may not occur according to the extent and influence of the poison upon the maternal and fœtal tissues. The placenta may be affected throughout its entire thickness, or only either the maternal or the fœtal portion. When the infection occurs through the mother, the maternal portion is that which is chiefly involved, and *vice versa* when the disease approaches through the fœtus.

The local manifestation of the syphilitic virus in the decidua, as a general rule to which I know of only two exceptions, ceases as soon as separation takes place, whether by miscarriage or labor at full term. The degenerative changes which follow the termination of gestation seem sufficient to remove the involved endometrium. This process must almost invariably take place. I have been unable to find any references in the literature of this subject to a continuation of the syphilitic manifestation upon the endometrium after labor or miscarriage. If observers have noted this condition they have been singularly remiss in calling attention to it. That a condition of continued involvement of the mucous membrance at the placental site does occur, my experience with two cases herein related fully confirms.

The condition observed is one of continued proliferation of epithelial tissue—a highly luxuriant granulation, if I may so term it—which returns again and again after removal, resembling in this respect the proliferative exfoliations of an epithelial cancer. The sole origin of this condition I have referred to secondary manifestations of syphilis in the endometrium at the placental site or in this neighborhood. The disease under consideration has followed, in two cases under my own observation, a miscarriage which was referred to the influence of the syphilitic poison. In case two there was a return of

the endometrial trouble, after an interval of three years from date of former treatment, which could have no reference to any other known causative influence. In my opinion syphilis was the entire cause of an inflammatory condition of the endometrium which was followed by hyperplasia of the elements of the decidua, a condition which has been described by De Sinéty as a fibroid degeneration of the villi of maternal syphilitic origin. Why the latent influence of the syphilitic virus should have manifested itself in endometrial involvement I am unable to explain any more than the various other singular anomalies of this disease which do not seem susceptible of rational solution. We can the more readily understand the primary outbreak of secondary syphilis in the decidua and placenta during gestation, and the continuation of the syphilitic influence upon the endometrium after miscarriage, since here we have the possible retention of placental tissue as a probable nidus for the subsequent outgrowth of granulations. In this instance the influence of the poison is simply continued until overcome by local and constitutional treatment.

The subsequent development of syphilitic lesions upon the endometrium I can only account for upon the general assumption of a local dyscrasia in connection with the lining membrane of the uterus, inviting a concentration of the specific influence upon this membrane, which resulted in hypertrophy of the glandular elements and a degenerative change in the epithelial lining of the uterine cavity.

In case one, in which the local influence was continued after the separation of the fœtus, the lesions were localized—that is, in seeming relation with the placental site. In case two, the entire lining membrane of the cavity seemed involved, though the process in this case was more tractable to treatment than in case one.

I present the histories of these cases.

Mrs. A., aged 24 years, primipara, miscarried between the fifth and sixth months of pregnacy. Prior to this event she had been treated by her attending physician for an indurated chancre and subsequent mucous patches on her vulva and labia minora. This disease she had contracted from her husband during the early weeks of married life. She was not informed as to the nature of the affection, and has been kept in ignorance of the specific character of her trouble out of deference to her domestic relations. Following the miscarriage, a portion of the afterbirth was retained, but this was speedily removed with the curette. Hæmorrhage, however, continued for some five or six weeks, and during this time the curette had been employed two or three times, each time removing lumps of degenerated mucous membrane and vegetations. The uterus remained large, subinvoluted, and in a very relaxed condition, and as a result of frequent intra-uterine applications and curetting, a mild metritis was induced, which was followed by elevation of temperature, violent pain, and profuse muco-purulent discharge more or less tinged with blood. Recognizing the specific history of this patient the family physician made use of anti-syphilitic treatment with almost negative results. Mrs. A. continued to run down, and by copious losses of blood was greatly reduced in flesh and strength. Her physician losing confidence in his own intelligent treatment of the case requested me to see the patient in consultation, and then insisted upon my taking entire charge of the case. The diagnosis already established was confirmed, and an effort was made to relieve the distressing symptoms, which at this time were referable to the constant and profuse hæmorrhage, subinvolution, uterine colic, and general debility. Ergot, which had previously been administered, was again employed. The uterine cavity was carefully curetted, and large masses of epithelial tissue and vegetating fungosities were removed. Astringent applications, iodoform, tannin, and other agents designed to influence the tissues through local effect,

were employed. The result of this method was temporary in its effect. Hæmorrhage would cease for a few days, but the least bodily exercise would cause its reappearance. The granular condition of the endometrium would again and again reappear after constant curetting, employed at intervals of one or two weeks. The tendency to a re-formation or outgrowth of fungous neoplasms was so constant that it was next to impossible to suppress them for a longer time than a few days. In addition to the local treatment, which was heroic enough to answer every temporary purpose, ergot and iodide of potash and general tonics were administered thrice daily in large doses. Mercury had been employed by my predecessor, and I simply gave the iodide of potash. This condition of the endometrium continued off and on for over three months, during which time I employed the curette frequently and made constant applications to the endometrial surface. Finally the tendency to proliferation of fungous tissue began to diminish and I had the pleasure of witnessing a gradual shrinkage in the size of the uterus, a contraction of its walls, and returning healthy condition of the endometrium. The menorrhagia, which continued off and on for over four months, finally ceased and menstruation became normal. It has continued so up to the present time, now five months since recovery. The involution of the uterus is not as yet complete, but the uterine cavity is contracted and more in keeping with the normal shape and size. During the early progress of the case the cavity was so large that it would have contained easily a medium-sized orange.

In this case the tendency to re-formation of granular tissue was more marked than I ever witnessed. In some of its aspects the proliferation of neoplasms resembled a malignant degeneration, but this idea was dismissed and the theory of syphilitic influence was accepted as in full accord with the history of the case.

The explanation seems to be this: Under the influence of specific disease the placenta and decidua were primarily involved and separation took place, which resulted in the miscarriage of pregnancy and the removal of the fœtus and secundines. The decidual membrane remained behind involved in syphilitic disease, and, in its exfoliation, continued to develop neoplastic tissue. The process of degeneration thus established was continued under the influence of the syphilitic virus. As fast as one set of neoplasms was removed a new set came on to take its place, thus continuing the pathological state of the endometrium. I am convinced the influence of iodide of potash was a potent factor in the treatment of this case. This was shown on several occasions. It became necessary several times to discontinue the use of the drug in consequence of its effect upon digestion. During these intervals, whether from a bias in my own mind or actual fact, I was led to believe that hæmorrhage was more severe and the recurrence of the neoplasms was more marked. I had never before witnessed a condition of endometrium at all similar to that present in this case, and I have associated the influence of syphilis with the causation of the condition herein described. In my opinion a non-syphilitic endometrium would not behave in this manner. In cancerous disease a similar condition might be observed, but the recovery of my patient disproves this assumption, whilst her history gives strength to the syphilitic theory. Whilst this case was fresh in my mind a second case came under my care which confirmed the view expressed above in regard to the influence of syphilis upon the endometrium. The extent of the involvement was neither so great nor so intractable as in the case of Mrs. A., but the history of the patient clearly points to a syphilitic influence extending through a series of years and secondarily involving the endometrium after a lapse of some three years.

Mrs. B., aged 27, primipara, was married

six years ago. Some six months after marriage she became pregnant and about the sixth month of utero-gestation she miscarried without any assignable cause referable to objective conditions. Subinvolution, menorrhagia and metrorrhagia followed in the wake of the mishap, and for many months the health of this lady was greatly depreciated.

She was treated both locally and constitutionally by several physicians, with the result that hæmorrhage ceased but subinvolution remained. Her husband, a gentleman of considerable intelligence, had contracted syphilis some time prior to marriage, for which he had been treated, with what he presumed to be entire success. Believing himself cured he entered into matrimony only to find the germs of the disease aroused into new activity by the new state. He almost immediately inoculated Mrs. B. with the poison, which became manifest in constitutional disturbance as well as in the local influence upon gestation. Following the miscarriage, which was the first explosive effect of the syphilitic poison upon the part of the latter, both husband and wife were placed under syphilitic treatment by a physician in New York City, to whom they both applied. The wife was kept in ignorance of the nature of her disease, and, of course, that of her husband, and this ignorance now holds. The successive years of struggle with syphilitic manifestations by husband and wife I shall not discuss here, but the history is not an uninstructive one. Outward manifestations were so successfully combated with anti-specific remedies that a complete check was placed on these. With the exception of sore throat, slight loss of hair, and rheumatic pains, the husband has escaped. The wife continued to bear the legacy of an interrupted gestation in the shape of an entailed uterine disease. With the exception of backache, pelvic pain, leucorrhœa, and general debility, no symptoms had occurred during the past three years referable to the uterus until six months ago. She had never conceived during this time. About May last, without any exciting cause, uterine hæmorrhage became profuse at the period, and during the intermenstrual period there was a free loss of blood, lasting over two or three days. Menorrhagia and metrorrhagia were both established. This condition continuing, in spite of the use of ergot and other ecbolic agents, the husband became alarmed, brought his wife to this city, and placed her under my care. Upon examination the uterus was found to be unusually large, flabby, and relaxed. The probe easily entered three and a half inches. The cavity was open and distensible, readily admitting of the free rotation of the sound. The cervix was patulous and eroded, the edges gaping from an old bilateral laceration. The mucous membrane of the cervix and body was highly granular, and bled profusely the moment it was touched. The introduction of the curette brought away large masses of epithelium and gelatinous vegetation, which clearly accounted for the free flow of blood. Hæmorrhage stopped the moment the curetting ceased; in fact before it was complete, for the uterus contracted so firmly under this stimulus that the blood supply was immediately cut off. Within less than a week's time there was a return of hæmorrhage, and the highly vascular condition of the endometrium reappeared. The curette was again introduced and again a mass of epithelial tissue and vegetations was removed. Under this second curetting hæmorrhage again ceased, and notwithstanding the fact that daily applications of tannin and glycerine and iodoform were made to the entire endometrium, the tendency to re-formation of the vegetations went on, and curetting again became necessary. These neoplasms were again removed in less quantity than in the first instance. Local applications were made to the uterine cavity during the three subsequent weeks before the mucous membrane assumed an approximate normal condition.

Iodide of potash was given in 15-grain doses *ter die* during the entire period, and I have reason to believe its influence was direct.

I am unable to account for the condition of the endometrium observed in this case save on the ground of a syphilitic influence. Would a non-specific endometritis behave in this way? I confess my own experience has never presented a case at all similar. Whilst I have frequently met with granular conditions of the endometrium following miscarriages and in the non-gravid state, they have almost invariably responded to treatment when first instituted and have shown no such tendency to continued reformation of neoplasms as in the two instances cited. The knowledge of a syphilitic history in these cases induces me to refer the influence to the disease in question, and leads me to formulate the law that in all cases of obstinate and persistent endometrial involvement the condition of a syphilitic influence should be questioned.

I cannot but believe that the assumption of a specific influence as an etiological factor in obstinate conditions of endometrial disease may lead to the employment of constitutional treatment *pari passu* with the local which may secure results at variance with our expectations. It is well known that many women have specific disease of which they are wholly ignorant, and we may readily suppose that in a certain number of this class the influence of the specific poison may manifest itself in an impression upon the endometrium either through repeated miscarriages, through catarrhal states inducing, it may be, sterility, or in conditions allied to those described in the cases herein related.

DISCUSSION OF DR. ASHBY'S PAPER.

Dr. WILSON said that he had had similar cases occasionally during his thirty-six years of practice. The facts in one case were in brief as follows: He was called to treat the patient for a persistent metrorrhagia. Under the local use of Churchill's tincture of iodine the patient so far recovered that she was delivered at term of an apparently healthy child. When a few months old this child developed a characteristic syphilitic eruption and died with hydrocephalus. This experience was repeated in the case of a second child. Until some months after the death of her second child the mother presented no signs of syphilis. At that time a general syphilitic eruption appeared, and she never subsequently conceived. Before the first conception mentioned, her physician was unaware of the fact that her husband was a syphilitic.

Dr. BROWNE recalled the case of the wife of a syphilitic man, who, without ever showing any signs of syphilis herself, had several abortions at the third and sixth months. Her uterus was large, flabby, with a tendency to bleed. She was put upon anti-syphilitic treatment, gradually improved, and has since borne healthy children.

Dr. C. O'DONOVAN, Jr., read a paper entitled, "Remarks on the Use of the Manganese Compounds in Menstrual Disorders."

The paper consists mainly in a review of the contributions which have appeared in the various medical periodicals.

Attention was first called to this use of these compounds by Dr. Broadbent, of London, in the Clinical Society Reports, 1869. Next, Drs. Sidney Ringer and William Murrell reported 69 cases in the *Lancet*, January 6, 1883. They reported the drug, permanganate of potash, useful in all forms of intrapelvic atonic relaxation, or engorgement not due to obstruction. They used one-grain pills, giving one pill three times daily, increasing to two pills three times daily.

Dr. F. H. Martin, of Chicago, has published three papers upon the subject, as follows: *The Medical Record*, September 29, 1883; *The New York Medical Journal*, January 24, 1885; and the *Chicago Medical Journal and Examiner*, September, 1885.

In the discussion of Dr. Martin's second paper Drs. Paoli and Havens reported over 50 successful cases.

Dr. E. J. Doering, of Chicago, reports in the *Chicago Medical Journal and Examiner*, April, 1885, 14 cases—8 successes and 6 failures. Dr. O'Donovan, however, thinks that these cases were not well selected.

In the *New York Medical Journal*, July 27, 1886, Dr. Fordyce Barker enthusiastically supports the use of manganese as an emmenagogue. He mentions three well-defined states of women in which the happiest results may be expected:

"1. In young ladies who come to New York to finish their education, leaving a comfortable home for a boarding-school with more or less uncongenial surroundings, and consequent homesickness, with various neurotic ailments, one of which is apt to be suppression of menses.

"2. In women, whether young or old, who have just returned from Europe, in whom the sea-sickness and other discomforts of the ocean voyage have produced suppression. These he cures invariably.

"3. In those women who develope a decided tendency towards obesity when they become thirty, or thereabouts, and who suffer from various disorders, both physical and psychical, as a consequence, in whom catamenia usually disappear, or become very scanty, causing thereby an aggravation of their other troubles. To these, and to his other patients requiring the remedy, it is administered in doses of two grains three times a day, followed immediately by half a tumbler of water."

Dr. C. E. Billington, of New York, in the *Medical Record*, March 6, 1886, reports four cases, appropriately chosen for the remedy, three of which were cured perfectly, and the fourth much benefited after other drugs had failed. All, however, complained of the usual stomach troubles.

In this paper Dr. T. G. Thomas is reported as using the McKesson & Robbins two-grain pill of manganese binoxide, and speaks of the effects of the drug as "the best I have met with."

Dr. A. F. Kerr, of Williamsville, Va., reports in the *St. Louis Courier of Medicine*, 1886, three cases treated successfully, in two of which peculiar symptoms were encountered; one being an epileptic, with amenorrhœa, in whom menstruation appeared promptly, causing a great improvement at the same time in the epilepsy; the other was a negro who had been subject to vicarious menstruation by the nose, and whose epistaxis ceased upon the reappearance of the menses.

Dr. H. J. Boldt, of New York, in the *Medical Record*, May 26, 1886, says that in selected cases, especially after sea-sickness, he prefers permanganate to any other emmenagogue.

Dr. William T. Ellis, of Livermore, Ky., reports in the *American Practitioner and News*, January 8, 1887, 15 cases, all successes. He uses the one-grain permanganate pill of Parke, Davis & Co.

Mr. T. Maury Deas, of Exeter, England, in the *British Medical Journal*, April 18, 1887, mixes the drug into pills with kaoline oinment, and gives it rather more freely than usual, having given three to six grains three times a day for weeks, and relates one instance in which the catamenia reappeared six months after the commencement of the treatment. He concludes that—

1. Permanganate of potash is a useful and safe emmenagogue, and free from the disadvantages which attend some other remedies of the class.

2. Its use may be continued for months without any bad effects, and success need not be despaired of even after many months.

3. Even when it fails as an emmenagogue, it acts beneficially as a general and nervine tonic.

Dr. Bartholow, of Philadelphia, in the *Medical News* (Phila.), November 22, 1884, quotes from two continental authorities its good qualities in amenorrhœa and

"dysmenorrhœa, characterized by scanty menstruation and anæmia." This is in an exhaustive article on "Permanganate of Potash, its Action and Uses," in which he takes the ground that the properties of the salt are due entirely to the nascent oxygen set free in the stomach, and likens it to the effects produced by ozone used therapeutically. From this conclusion, after a thoughtful consideration of the views and experience of the various observers from whom I have quoted, I feel obliged to dissent, especially after remembering that similar results were obtained from other compounds of manganese—the chloride (Broadbent), the binoxide, and the inunction of the oleate—which latter must effectually dispose of the nascent oxygen theory, leaving us no doubt of the fact that the benefit is derived from the manganese alone. Nor need we be at all surprised at this when we remember that in the same elemental group with manganese are included iron and nickel, the multitudinous uses of the former being known to every practitioner, and the latter an almost untried remedy, believed by some to possess powers that must be eventually recognized. I am myself prepared to accept Dr. Martin's idea, that manganese is somehow a powerful stimulant of the nerve supply of the genital system; but whether in its direct effect upon the trophic nerves of those organs, or through the centres in the brain or cord which regulate their functions, I must wait until physiologists may have investigated before reaching any conclusion, using, meanwhile, what knowledge has been derived from clinical experience for the benefit of my patients.

The opinion seems to prevail, in the article cited, that the gastric trouble complained of in using the manganese compounds does not occur if at least one-half cupful of water is taken with them.

In the discussion of this paper, Dr. Ashby reported the case of a healthy, well-nourished young lady, age 23 years, who has suffered all of her menstrual life with amenorrhœa. She menstruates scantily about once in from six to eight months. Three weeks ago he placed this lady on two-grain doses of permanganate of potash, thrice daily. When she had taken her 49th pill menstruation came on. Various other remedies had been employed by other physicians without producing this result. Dr. Ashby called attention to the difficulty of getting the drug in pure form. He had found many of the pills unreliable. By changing from one manufacturer to another he often obtained the remedy in a satisfactory form, as was shown by its influence.

Professor B. B. BROWNE read a paper on "Electrolysis for Fibroid Tumors and Pelvic Exudations."

He said: For the past twelve years I have used the galvanic and Faradic currents in the treatment of gynæcological cases, many times obtaining the most satisfactory results after the failure of other means.

The greatest objection to the use of electricity in these cases is the difficulty of keeping the batteries, especially the galvanic, in working order.

In 1877 I used the galvanic current with decided success in the treatment of a large sub-peritoneal fibroid tumor which filled the whole pelvis, and extended above the umbilicus. The tumor was nodulated and seemed to be everywhere adherent; the woman had persistent metrorrhagia, for which she had been previously treated with hypodermic injections of ergot as well as its internal use. Galvanism was applied by introducing the positive pole into the cavity of the uterus and placing the negative sponge electrode over the abdomen. The current was made as strong as the patient could bear without producing decided pain. The application was continued for about fifteen minutes at each sitting and was used twice a week for three weeks; the metrorrhagia was arrested after the third application, and the tumor also

diminished in size after the first week. The pains and discomfort accompanying it were relieved at the end of the treatment, and the tumor then was less than one-half its original size.

The treatment I pursue at present is more of a radical measure than that above described. I now place the patient under an anæsthetic, introduce the two needle electrodes through the abdominal walls into the substance of the tumor, and gradually turn on the cells until twenty-four are brought into use. I keep on the twenty-four cells for forty-five minutes, then gradually reduce them and turn off the battery and remove the needles. The patient is then put to bed and kept under the influence of opium for 24 hours, or longer if there is any tenderness or pain over the abdomen. She is kept in bed from three to seven days.

If there be menorrhagia I use as the positive pole an intra-uterine electrode introduced into the cavity of the uterus, continuing this for a few short sittings until the tendency to hæmorrhage ceases; then I use the needle electrodes as above described. If we wish to cause the absorption of a fibroid tumor or of an exudation we must place the needles so that the whole of the current shall be localized in the tumor and not diffused by passing through other resisting tissues.

Before using the needles I dip them in a strong solution of carbolic acid. After the needles have been *in situ* for ten or fifteen minutes a yellowish-white foam collects around the negative needle; at the positive pole a whiter fluid sometimes collects. Where the tumor can be readily reached through the vagina it is preferable to insert the needles from this direction.

It is very frequently the case that the positive needle becomes fixed in the tissues, and sometimes it is quite difficult to remove it. We then find it roughened and corroded by the action of the acids which accumulate around the positive pole.

In regard to the kind of galvanic battery that gives the best results in electrolysis, I think the liquid batteries are the best, although the chloride of silver or dry battery is much more convenient to manipulate, and keeps in better condition than the former.

I will, however, relate two cases from many similar ones, showing the effect of electrolysis on fibroid tumors and pelvic exudations.

Case I. M. H., colored, age 33 years, married ten years, sterile; has not had her menses for three years; abdomen as large as at full term of pregnancy. Suffers great pain in walking and is unable to work; uterine cavity measures four inches; the whole pelvis is filled with a large fibroid tumor that reaches above the umbilicus.

March 5, put her under ether and used the needles through the abdominal walls into the tumor; gradually increased the current to twenty-four cells, and kept them on for thirty minutes; then gradually reduced the current, removed the negative needle, and attached the uterine electrode to the negative pole, inserted it into the cavity of the uterus, and kept it there fifteen minutes, with twenty-four cells in the circuit. The current was then gradually turned off, the patient put to bed, and kept under opium for two days; on the fifth day she got up, and, as there was no pain or tenderness over the abdomen, she was allowed to walk around her room; on the seventh day she returned to her home in the country, with instructions to return at the end of six weeks for another treatment. She returned at the stated time; the tumor had diminished very much in size, the pains in the abdomen were gone, and she was able to walk with comfort, and could do more work than she had been able to do for the past three years. As she had improved so much and as the tumor was continuing to diminish in size, no treatment was made.

About two months after this she returned to the city again, but as she was feeling well and the tumor getting smaller, electrolysis was not used.

CASE II. Mrs. R., age 22 years, married two years, was confined October 5, 1886, instrumental delivery.

Had gathered breast which confined her to bed for four weeks. Seven weeks from date of confinement Dr. W. was called to see her at night and found her suffering with acute pain in the right inguinal region, radiating up to the umbilicus; the pain was very intense, and required constant hypodermics and large doses of opium to give relief. Ten weeks after confinement Dr. W. found upon vaginal examination a large, hard, tender mass posterior and to the right of the uterus which was immovable and fixed by the exudation.

Pain continued for more than four months, during which the usual treatment for such cases was faithfully persevered with.

On April 7 she was put under chloroform, the two needles were inserted into the mass of exudation through the vagina, and twenty-four cells of the battery were gradually turned on and continued for forty-five minutes. The pains throughout the pelvis were somewhat increased for the first two days after the electrolysis, then a profuse discharge continued for two or three weeks; it was free from smell, was not pus, but looked somewhat like the lochial discharge. The pains now left her and she commenced to gain strength. Six weeks after the operation she went north and remained during the summer. Upon her return, in September, Dr. W. made a vaginal examination and found only the slightest remains of the exudation in some thickening of the tissues at its former site; there was not the slightest pain or tenderness in the parts.

DISCUSSION.

Dr. ASHBY gave a very brief description of Apostoli's method of using electrolysis in uterine fibroids, and said that while he is not prepared to say that it is superior to other methods of treating these tumors, he thinks that it is entitled to careful trial in suitable cases.

Dr. B. B. BROWNE said that he had never used electricity in acute inflammatory conditions, but he had never seen its use give rise to inflammation.

He thought the danger from shock necessarily less in his own manner of applying the electrodes, for the entire strength of the current was thus exerted only on the substance of the tumor, and caused its disintegration.

He considered that this treatment for large sub-peritoneal fibroids of the uterus would to a great extent take the place of hysterectomy or removal of the ovaries, the latter being often impossible if the tumor was of large size.

Electrolysis also breaks up adhesions and thus relieves pain, so that, although the tumor may not be entirely removed, the condition of the patient is greatly improved.

NOTES FROM FOREIGN MEDICAL SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Etiology of Vesical Growths.—A series of specimens intended to show that irritation of various kinds played a most important part in the production of vesical growths were demonstrated by Mr. HURRY FENWICK. He pointed out that the very earliest form of villous papilloma was to be found in a small patch of stunted papilloma known as subvilloid or cropped villi, and in most of these specimens there existed definite evidence of irritation. Thus, in a case of Dr. Beaven Rake's the patch was found at that part of the bladder which impinged against a straw, coated with phosphates, four inches and a half long. In Dr. Newman's case the tumor was at the apex of the bladder, and seemed due to the irritation of a large oval stone. Mr. Fenwick then alluded to age and to the position of villous papillomata as corroborative evidence. In carcinoma he believed that the irritation of residual urine was a most important causative factor, and

quoted cases in the museums of Stockholm, Glasgow, and London.

Mr. MARMADUKE SHIELD referred to a case of carcinoma of the bladder which had followed at a considerable interval on epithelioma of the penis; amputation of the penis was followed by stricture; the new growth was attributed to the prolonged irritation of instrumentation and of putrid urine. The specimen had been shown to the society two years ago.

Mr. EVE said that in the specimen he showed of a urinary bladder from a case of bilharzia the thickening of the organ was purely inflammatory.

Dry Caries.—Four specimens of dry caries were shown by Mr. EVE, who referred to the occurrence of this condition in syphilis and tuberculosis. One specimen, from the museum of the London Hospital, was an example of angular curvature taken from a man, aged 39, in which no abscess ever formed, and no pus was found after death. A second specimen, from the museum of the Royal College of Surgeons, was also an example of angular curvature from the dorso-lumbar region. There was caseous material and necrosis, but no evidence of suppuration. Two other specimens showed extensive destruction of bone without suppuration. In one (presented to the museum of the Royal College of Surgeons by Mr. Jonathan Hutchinson), there was complete destruction of the cancellous tissue of the oscalcis, which was replaced by fibrous tissue; there was no evidence of tubercle. The cases ought not to be confounded with rarifying osteitis occurring in connection with simple inflammatory action, or with tuberculosis.

Mr. MARMADUKE SHIELD said that many of the cases of dry caries of the spine were associated with caseation, as in one of the specimens shown. In such a case, where the caseous matter was inclosed in a distinct sac, he thought it most probable that there had been suppuration, and that the fluid part had been absorbed, leaving a caseous mass. Paraplegia was not infrequent where abscess was not present, or at least apparent, while where suppuration was present paraplegia seldom occurred.

Mr. MORRANT BAKER thought this was an interesting clinical observation which his experience confirmed.

Mr. R. W. PARKER had found from the examination of a large number of reported cases that abscess occurred less frequently the higher up the vertebral column was diseased, which might account for it.

Dr. ANGEL MONEY agreed with Mr. Marmaduke Shield's statement.

Mr. WALSHAM thought there was no doubt about its being correct.

Case of Anomalous Sacral Appendage.—An infant under the care of Mr. EDMUND OWEN was shown to the society. On the lower part of the back was a rounded swelling measuring $3\frac{3}{4}$ by $3\frac{1}{2}$ inches, and projecting about seven-eighths of an inch. The lower limit was just above the fold of the nates; the tumor, which was situated a little to the left of the middle line, presented in the exact centre an umbilication. Half way between the dimple and the lower border, and slightly to the left of the middle line, was a soft appendage about 2 inches long, and having somewhat the appearance of a fat "little finger"; the base of the appendage was constricted. On the left side of the base of the appendage was a second small excrescence a quarter of an inch long. Both hands were badly developed, being smaller than natural; all other parts of the body appeared to be normal. The child was born at full term, and there was no history of deformity in the family. Mr. Owen suggested that the rounded swelling was the result of spina bifida, while the appendage, and perhaps the tumor also, was the result of an imperfect attempt to produce a double monster; the sacral region was by no means an infrequent site for the attachment of a fairly developed or rudimentary fœtus.

Mr. MORRANT BAKER and Mr. J. B. SUTTON both agreed that the case was an

example of parasitic fœtus. Mr. Sutton observed that if during development the medullary fold remained cleft, two complete fœtuses were formed from a single ovum; this was probably the explanation of twins of the same sex in one amniotic sac. From this there was every degree of combination, from Siamese twins to such a case of very rudimentary fœtus as that shown by Mr. Owen.

Imperforate Urethra.—Mr. SHATTOCK showed a fœtus of about four months; the abdomen was greatly distended, and when opened was found to contain a relatively immense cavity which almost filled it; opening into this large cavity the two ureters could be seen. The kidneys were in a condition of cystic disease. The intestine terminated in a well-formed rectum. The urethra was closed. Mr. Shattock discussed the mode of production of this and other similar deformities in a paper of some length, and involving very technical embryological matters.

OBSTETRICAL SOCIETY OF LONDON.

Specimens.—Mr. MEREDITH showed two large pedunculated fibroid tumors, in both of which axial rotation had occurred, and in one to an extent involving occlusion of the cervical canal and retention of the menses.

Dr. LEWERS exhibited the cervix uteri, removed by supra-vaginal amputation on account of carcinoma, from a patient in whom abortion had been induced at the fourth month, a fortnight previously.

Dr. CARTER showed an epitheliomatus growth removed from the cervix by galvano-cautery.

Dr. W. DUNCAN exhibited ovaries and a piece of jejunum, the latter showing perforation after ovariotomy.

Dr. W. S. GRIFFITH showed a specimen of myxoma fibrosum of the chorion.

On the Effect of Ergot on the Involution of the Uterus.—A paper on this subject was read by Drs. G. E. HERMAN and C. O. FOWLER. They pointed out that the recommendation of a mixture containing ergot during the lying-in period was based upon a general knowledge of the action of such drugs and of the process of involution. No observations had been made, so far as they were aware, as to the actual effect of this treatment upon the process of involution. They had sought to ascertain its effect by measuring the height of the uterus above the pubes on successive days of the lying-in, in two sets of patients—one set (fifty-eight in number) treated with an ergot mixture for a fortnight after labor, the other set (sixty-eight in number) given a single dose of ergot after labor and no more. They found that in the cases treated by the continuous administration of ergot, the uterus diminished more rapidly in size than in those in which one dose only was given. They compared the two sets of cases as to the duration of the lochial discharge, but on this they did not find that the ergot treatment produced any appreciable effect.

Dr. BOXALL contrasted two series of cases, each referring to 100 patients. Every alternate patient admitted to hospital was given a mixture three times a day, containing ext. ergotæ amm. m. xv for a dose, during the first three days of lying-in. To avoid fallacy in the comparisons, the two series of observations were carried on simultaneously. The ergot mixture was given in the first series. In the second its routine administration was omitted, but in the series were included thirty-one patients for whom, on account of hæmorrhage, severe after-pains, etc., ergot was subsequently prescribed. The results were presented in a tabular form. By contrasting the two series of cases Dr. Boxall concluded: (1) That though the routine administration of ergot during the first three days of the puerperium exercised no appreciable effect on the date at which the lochia ceased (in this respect confirming the observations of the authors of the paper), the practice of giving ergot mixture during the three days following delivery tended to prevent the formation of clots

and to hasten their expulsion and to diminish the frequency, intensity, and duration of after-pains. (2) That if omitted at first but given after, the ergot mixture tended to promote the expulsion of clots and to relieve after-pains. Dr. Boxall considered that (*a*) the routine practice which he had followed, of administering a douche at 110°–115° F., not only immediately after labor, but also twice a day during the puerperium until the lochia ceased (a powerful stimulant to the uterus); (*b*) the ergot which was given in every case immediately after labor, and (*c*) the ergot mixture which was prescribed subsequently in thirty-one of the cases included under the second series, all tended to lessen the difference which he had shown to exist between the two, and that in consequence the beneficial effect of the ergot mixture was even greater than that shown by the figures given in the tables.

Dr. DAKIN had made observations as to the effect of systematic administration of ergot for some days during the puerperium on cases in the General Lying-in Hospital while he was house physician. They did not support the view which the authors took, but showed that the average day when the fundus had sunk to the brim was 9.12 when ergot was given once only, and 10.3 when ergot was given daily for three days. There were, however, other fallacies than those named by the authors, for, in addition to the condition of bladder, rectum, thickness of abdominal wall, and weight of the uterus in the pelvis, there was the condition of the uterine axis, whether flexed or inclined anterio-posteriorly or laterally. He had found in a number of consecutive cases taken at random, that one-sixth of the uteri were in the axis of the body. These ought not to be compared with cases of anteflexion and version usual to the uterus during the puerperium, as there might be a difference of three inches or more on this account alone. In one of Dr. Dakin's cases the fundus was found one day in the left hypochondriac region nine inches from the pubes, whereas in the next it was to the right of the middle line, and only measured five inches and a half. He agreed with Dr. Boxall that the lochia were a better criterion of the rate of involution, and in this his own figures did not agree with the author's, for with one dose of ergot the average was 9.8, with three days of ergot 11.6. With reference to the retention of clots and the occurrence of after-pains, he found that, out of 92 cases where ergot was given for three days, 51 (55.4 per cent.) had after-pains, and 22 (23.9 per cent.) passed clots. Out of 103 cases where only one dose of ergot was given, 64 (62.136 per cent.) had after-pains, and 141 (3,592 per cent.) passed clots, so that the ergot cases had fewer after-pains but passed more clots. The unergotized cases, like Dr. Boxall's, passed clots up to the tenth day, whereas the ergotized ones passed no clots after the sixth day. It seems that the continuous use of ergot, by keeping up a tonic state of contraction, instead of allowing normal alternate contraction and relaxation, would tend to favor retention of clots and to prevent the normal process of involution. This was to a great extent borne out by his figures.

Dr. SWAYNE wished to know if chloroform was used during delivery, and in how many of the cases. In order to ascertain accurately the effect of ergot given after delivery, in his opinion it was necessary to remove all disturbing influences, such as the administration of anæsthetics during labor.

Dr. HERMAN, in reply, said that the cases observed by Dr. Dakin (which seemed to support an opposite conclusion to that arrived at by Dr. Fowler and himself) were only given ergot for three days, while their cases took it for a fortnight, and he did not therefore regard the two sets of cases as strictly comparable. The sources of error from the mode of measurement pointed out by Dr. Dakin had been present to the minds of Dr. Fowler and himself, but there was no other mode which was not

attended with sources of fallacy. Such errors as arose from anteversion and anteflexion of the uterus were equally distributed among the two sets of cases, and so did not vitiate the comparison. Dr. Fowler and himself had paid particular attention to the occurence of lateral displacement, and had found that it depended, in the majority of cases, on the position in which the patient had been lying. They had not referred to it in this paper, as it did not seem to have any important bearing on the subject of the paper. In reply to the question of Dr. Swayne, chloroform had been given in six of the cases, namely, three of each series.

HARVEIAN SOCIETY OF LONDON.

The British Medical Journal says of the Harveian Society of London: The annual general meeting and *conversazione* of this society took place on Thursday, January 19, at the Marlborough Rooms, Regent street. A business meeting for the election of officers for the ensuing year and for the usual complimentary votes of thanks to the retiring officials was held in the lower room; and the retiring president, Mr. Edmund Owen, delivered an address which was heard with close attention by a large audience Dealing chiefly with the subject of medical education from the point of view of a hospital teacher, Mr. Owen pointed out with considerable force the disadvantages under which students of medicine must labor so long as the preliminary subjects continue to be a part of the hospital course, and showed how impossible it has become for any but the most brilliant to acquire real knowledge, owing to the constant demand made upon his time by periodical examinations which leave no interval in which to assimilate the knowledge thus forced into the mind. He criticised somewhat strongly certain recent enactments of the University of London relating to students failing to obtain honors, which he considered were more advantageous to the examiners than to the students themselves. At the close of the address, which was warmly applauded, he introduced the president for the ensuing year, Mr. W. Sedgwick, who briefly returned thanks for his election on taking the chair.

Treatment of Loose Cartilage in Knee-Joint.—Mr. HERBERT ALLINGHAM read a case of suture of the internal semilunar cartilage of the knee to the head of the tibia. The patient was a man, aged 35, who had been constantly laid up by slipping of the internal fibro-cartilage of the knee. An incision two inches long was made, with its centre over the cartilage. The knee-joint was opened, and a strong catgut passed through the fibro-cartilage and the periosteum of the upper end of the tibia. The joint was washed out with carbolic lotion, and the synovial membrane united with deep catgut sutures; the wound was then closed without drainage. The patient, who was shown to the society, made a good recovery, and can now follow his employment.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.

A very interesting case was shown by Dr. W. R. Gowers and Mr. Victor Horsley to the fellows of the society. It was that of a gentleman of middle age, who had for more than three years suffered with acute pain in about the middle of the back, just below and inside the lower angle of the left scapula. The spot was very tender as well as painful, but below the region of the fifth nerve there was almost complete anæsthesia as well as complete paraplegia; the accuracy of the delimitation was more distinct on the left side than the right. After some discussion the diagnosis of tumor of the spinal cord was agreed upon, and Mr. Victor Horsley undertook the operation necessary for its removal. On June 9, 1887, the spines and laminæ of the fifth and fourth dorsal vertebræ were removed without laying bare the cause of mischief; but when the greater part of the posterior part of the

third vertebra had been removed, a myxoma about the size of a filbert became visible in the spinal canal, lying on the right side, and compressing the spinal cord. This was shelled out without difficulty and no further new growth was found. The pain was for a time slightly relieved, but again and again recurred with great severity, and the power of motion was only slowly and intermittently regained during the first three or four weeks. The pressure over the wound was treated by a pad and strong jacket; the local pain gradually diminished; the motor power gradually returned to the lower parts; and after seven months the use of the lower limbs, though a little stiff, had become almost natural, and the remains of the laminæ had come so near together in the well-healed cicatrix that any further external support seemed unnecessary.

Case of Intra-peritoneal Rupture of the Bladder; Abdominal Section; Suture of the Bladder; Recovery. By W. J. WALSHAM, F. R. C. S.—C. H., aged 22, was admitted March 1, 1887, into St. Bartholomew's Hospital under the care of Mr. Walsham. He had been drinking the night before, and in a fight was butted by his opponent in the abdomen, his bladder being full at the time. He passed a night of great agony and was brought in a cab to the hospital the following morning, but he was then suffering very little shock, and walked into the surgery with the assistance of two friends. He complained of pain in the lower part of the abdomen, and of having been unable to pass any urine since the blow, although his bladder was uncomfortably full at the time. The perineum was natural, and there was no history of stricture. On passing a catheter no urine flowed, although the point was ascertained to be in the bladder by the finger in the rectum. On depressing the handle the catheter was felt to free itself with a jerk, and its point could be then felt more plainly than natural through the abdominal walls. Bloody urine now escaped, the flow varying with respiration. About twelve hours after the injury Mr. Walsham opened the abdomen, and having discovered an intra-peritoneal rent in the posterior wall of the bladder, sewed it up with nine Lembert sutures. The sutures were passed through the muscular and peritoneal coats only, and one was placed above and below the upper and lower angles of the wound respectively. The bladder having been forcibly injected with eight ounces of boric acid solution and found water tight, the peritoneum was irrigated with about two gallons of warm boric acid solution, and the abdominal wound closed as in ovariotomy. A catheter was left in the bladder for two hours, and the patient subsequently reminded to pass his urine every four hours. There was little shock and the patient recovered. Daily notes were given at length. The author remarked that there had now been seventeen cases in which abdominal section had been performed for rupture of the bladder, three extra-peritoneal and fourteen intra-peritoneal. Of the three extra-peritoneal cases two died and one recovered. In the successful case the wound in the bladder was secured to the abdominal wall but not sutured. In the fatal cases death was due to shock. The rent in one was found securely sutured at the *post-mortem* examination; in the other the rupture had not been discovered on opening the abdomen. Of the fourteen intra-peritoneal ruptures the rent in the bladder was sutured in eleven, and in three a drainage-tube was placed in the wound but no sutures employed. Of these three one recovered and two died, death being due to peritonitis and suppression of urine respectively, Of the eleven cases where the rent in the bladder was secured by sutures five recovered and six died, death being due in three cases to peritonitis, in two probably to shock, and in one to hæmorrhage from a perineal incision employed for exploration. In the three cases of peritonitis the sutures had given way in one, and a leakage had occurred in the lower

part of the wound in the other two. In the five successful cases Lembert sutures were employed, and the peritoneum was washed out, and in only one was a drainage-tube used. The author discussed: 1, the advisability of early operation; 2, the importance of using a suture which will not become softened too soon, and of ascertaining before closing the abdominal wound that there is no leakage from the bladder; 3, the cleansing of the peritoneal cavity; 4, the inadvisability of a preliminary incision in the perineum, or of a subsequent incision in that region for the purpose of drain; and, 5, the question of tying in a catheter after the operation. A table of the seventeen cases was given, sixteen of which are in Sir William MacCormac's table appended to his work on "Abdominal Section."

Mr. HOLMES took a peculiar interest in the subject, and that, not only because he believed that he had been the first surgeon to suggest this method of treatment. It was a suggestion that must have become obvious as soon as we learnt how freely it was possible to deal with the abdomen. The preliminary diagnosis was sometimes very difficult. He had seen a case in which the *post-mortem* examination showed a rupture, but in which the patient during life had passed water without great difficulty. Dr. Weis, of Philadelphia, had suggested the preliminary injection of the bladder with fluid, but that, he thought, added little to the certainty in doubtful cases. The reason of the retention of the capacity to pass water after rupture was still to seek. If, as he was inclined to think, it might depend on the fact that the rent in the wall of the bladder was incomplete at first, then preliminary injection would be very dangerous. If it was due to the temporary plugging of the rent by the intestines, the safer course would be to cut down upon it early. It was important for diagnosis to make a preliminary exploration with a catheter. In his own case that had been sufficient to render the diagnosis quite plain. He doubted whether it was a good plan to inject the bladder after putting in the sutures; it might help to tear them out, and if they were near enough together it would be probably unnecessary. In all other points he cordially agreed with Mr. Walsham's treatment. Perineal incision had better be avoided; it was the cause of death in Mr. Teale's case, and had been merely vexatious in his own. He thought we should come to regard these cases as comparatively easy, so great was the improvement in abdominal surgery, compared to distant days, when he could remember seeing a patient with ruptured bladder but still looking fairly strong, come under Mr. Cæsar Hawkins's treatment, who diagnosed his injury rightly enough, but had nothing further to do than to watch him die of peritonitis.

Mr. BUTLIN said that he had made a *post-mortem* on a case of Mr. Willett's, in which an orifice had been found in a sutured bladder after death, and that had led several who had seen it to make up their minds not to refrain from injecting the bladder after suture in any similar case.

Mr. T. SMITH remarked that the operation could not be called completed until the bladder had been proved water-tight, as in cases of vesico-vaginal fistula.

Mr. BARWELL approved of the injections before and after operation, though he had had no opportunity of practicing them.

Mr. WALSHAM, in reply, had only a few words to say. He thought the preliminary injection might do a little good and no harm; and the injection subsequent to the sutures, he felt important, for in three fatal cases a leak had been shown to exist.

MEDICAL SOCIETY OF LONDON.

Nævoid Growth of Tongue.—Mr. PITTS also showed a child with a nævoid condition of the tongue. This had gradually increased in size until it hung out of the mouth, necessitating the removal of a triangular piece of the tongue to reduce its

size. It was still increasing in size, and he proposed to try the effect of multiple applications of Paquelin's cautery.

Case of Nævus of the Tongue.—Mr. JOHN MORGAN showed a male child, on whose tongue a nævoid growth was noticed when 18 months old. As since that time it had only increased in size *pari passu* with the growth of the tongue, and as he had on several occasions witnessed spontaneous disappearance of similar growths, he had decided to await the result of Mr. Pitts's experiment with Paquelin's cautery.

Electric Illumination of the Male Bladder and Urethra.—Mr. HURRY FENWICK showed a series of instruments made by Leiter of Vienna, and Hartwig of Berlin, armed with incandescent lamps for illuminating the male bladder and urethra, and demonstrated their capabilities upon patients and "dummies." He observed that endoscopy had attracted the attention and efforts of the profession since the commencement of the century, but the candle power hitherto used had proved insufficient. Quite recently (1887), however, the smallest Edison lamp had been employed, and the result had been brilliant. Instead of a cumbersome, costly, and fickle instrument, like the Nitze-Leiter endoscope of 1880, we now possessed a simple, practical, and safe apparatus by which the bladder or urethra could be examined in as strong a light as if it was viewed by direct sunlight. Every detail of the vesical or urethral surface was discernible under favorable circumstances, even to the small vessels coursing over the mucous membrane. Mr. Fenwick mentioned certain elements necessary for a successful bladder examination, and explained that the vesical endoscope needed much practice and patience before the observer could become proficient with it. He believed that the value of electric endoscopy could hardly be estimated, and he predicted that it would at once assume a high rank in the diagnosis of obscure vesico-urethral disease, and would become almost as indispensable as the opthalmoscope or laryngoscope. [Mr. Schall of Wigmore street (Mr. Leiter's agent for Great Britain) was in attendance, and showed various batteries for working the endoscopes.]

Mr. WALSHAM bore testimony to the ease with which he had been enabled to see a stone in a dummy bladder.

Dr. ROUTH asked whether the instrument had been applied to the examination of the uterus.

Mr. FENWICK, in reply, said that the instrument would doubtless be applicable to the examination of any orifice of the body.

Case of Unilateral Sweating.—Dr. ANDERSON showed a young man who suffered from profuse perspiration limited to the right side of the head, face, and neck. There was nothing in the man's history to give a clue as to its causation, and no history of syphilis. Two years ago, when on frontier service in Mexico, he had noticed what he called "powerlessness" of the right arm. He was unable to raise his right arm on getting up in the morning, but this generally passed off in an hour or two. The man's general health was good. He (Dr. Anderson) asked for opinions as to the cause of this curious condition and suggestions for treatment.

Thoracoplasty.—Mr. PEARCE GOULD read a paper on thoracoplasty, or Estlander's operation, and related the histories of four cases under his care.

CASE I. A girl, aged 9, under the care of Dr. Gilbart Smith, at the Royal Hospital for Diseases of the Chest, had in May, 1886, suffered from left empyema for two years. The left chest was considerably retracted, and there was a profuse discharge of pus from a sinus in the eighth interspace in the anterior axillary line. Mr. Gould made a vertical incision up from the sinus, and removed about an inch and a half from each of the fourth, fifth, sixth, and seventh ribs. The girl left the hospital in August, much improved in her general health, and losing only a small quantity of sero-purulent fluid from the

old sinus. She was readmitted in January, 1887, as the discharge had become purulent and more abundant, and the cavity had not shown any further tendency to close. Mr. Gould repeated the former operation, and removed parts of the second, third, fourth, fifth, and sixth ribs, dividing them at the anterior and posterior limits of the empyema cavity. The child recovered and was recently shown at a meeting of the society. The cavity in the chest is completely closed, and the girl's condition is very good.

CASE II was a boy, aged 9, also under Dr. Gilbart Smith's care at the Royal Hospital for Diseases of the Chest. He was admitted in January, 1887, for fistulous empyema, from which he had suffered for two years. The left side was retracted; in it were two sinuses in the second and sixth spaces, which discharged pus freely. The boy was anæmic, thin, and very delicate looking; his urine contained one-third its volume of albumen, and his liver was considerably enlarged. The sinuses were dilated, and the cavity was carefully drained and cleansed daily. Under this treatment he improved, but after two months matters came to a standstill, and on March 28 Mr. Gould explored the chest, found a considerable cavity, and through a vertical incision removed considerable lengths of the second, third, fourth, fifth, and sixth ribs. The ribs were severed in front at their junction with their catilages, and behind at the limit of the cavity. The very thick pleura within the ribs was also freely excised. The boy recovered well, and was shown to the society. The left side of the chest is greatly flattened on all sides, and there is still a sinus which discharges a few drops daily. His general condition is excellent. The urine is free from albumen, and the liver is not to be felt below the ribs.

CASE III was a boy, aged 12, who had measles followed by pneumonia and pleurisy six years before. Paracentesis was performed twice. Further surgical aid was refused, and a year after the empyema burst externally, and had continued to discharge freely ever since, a period of five years. On admission the left chest was quite fixed, and presented three sinuses. The heart-beat was displaced outwards and upwards. On July 14 the sinuses were connected by an incision, and led into a cavity through the second space, and the tissues were removed from the second to the seventh ribs, which were then removed *in toto*, together with much thickened pleura. Hæmorrhage was considerable, but was controlled by irrigation; a counter opening was made, and the opening closed. The lad left the hospital on August 15 with the wound almost healed, and in very much improved health.

CASE IV was an adult, aged 25, who had pleurisy in 1884, which was aspirated. After a varied hospital experience, she was admitted with considerable flattening of the right chest, and with a fistulous opening at the angle of the scapula, and another in the seventh space below the nipple, which discharged abundance of fœtid pus. By means of an incision ten inches long in the axillary line, the ribs from the second to the ninth were excised, fifty-four inches in all. The pleura, which was nearly an inch thick, was also freely excised. She died suddenly the next morning. The heart was adherent throughout, and much displaced and fatty. Mr. Gould explained the object of these operations and their indications, but he deprecated resort to them merely to save time. He insisted on the necessity for exploring the cavity before operating in order to adapt the operation to each case. The success of the operation varied, but he maintained that this would be increased as it was more extensively practiced.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Dr. JOHN PLAYFAIR showed the lungs of a child with a large pin impacted in the left bronchus. The little patient,

of 15 months, was said to have swallowed a pin. Various unsuccessful attempts had been made at home and in the Royal Infirmary, to determine the whereabouts of the pin. Soon after admission into the Sick Children's Hospital, the child was seized with grave dyspnœa, necessitating tracheotomy. This relieved the patient much, and in due time it was dismissed apparently well. About a year later the resident physician was asked to go to see the child, which he found dead. The cause of death was cancrum oris; but on *post-mortem* examination a large pin was found impacted in the left bronchus, not far from the bifurcation of the trachea.

Mr. SYMINGTON showed a beautiful section to illustrate the anatomy of the ear and naso-pharyngeal connections. Among other points of interest it demonstrated that the antrum does not communicate directly with the internal meatus, but with that passage through the medium of the infundibulum. The section also gave further support to the view that the Eustachian tube is normally a closed tube.

The Place of Specialism in General Practice, with Reference to Diseases of the Eye, Ear, Throat, and Nasal Cavities.—Dr. GEORGE HUNTER (Linlithgow) read an elaborate paper on the above subject. By means of illustrative cases, he showed the value which attached to a fair working knowledge of these diseases, more especially in the case of the general practitioner, and he advanced a strong plea for their fuller study in our medical schools.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The Surgery of the Thyroid Gland.—Mr. FOY read a paper on the surgery of the thyroid gland. After tracing the history of operations for the ablation of the gland and extirpation of tumor, he compared the modern operation of Dr. P. H. Watson with that recommended and practiced by Desault at the Hôtel Dieu in 1791. He condemned the many minor operations of setons, caustics, injections of irritants,and tapping, and gave the history of a successful removal of a cysto-adenoma from the right lobe of a young married woman's thyroid.

The PRESIDENT said that Dr. P. H. Watson had advocated the operation for the complete removal of the gland, while at the same time indicating that the surgeon must be prepared to see the patient die on the table—a fatality which occurred at least once in that distinguished surgeon's practice; and he dwelt strongly on the necessity of leaving the capsule untorn, especially the capsule surrounding the vessels.

Mr. STORY inquired what the indications were for operating on tumor on the thyroid gland.

Mr. KENDAL FRANKS did not think the size of a tumor in the neck a guide to operative procedure. Small tumors indicating a tendency to press backwards and sometimes down under the top of the sternum caused great dyspnœa and endangered life.

Mr. W. THORNLEY STOKER had operated in several cases of goitre, both by removal and by division of the isthmus, and in his experience the operator must be prepared for terrible hæmorrhage. He condemned, with Mr. Franks, the practice of passing a seton through the gland. The *rationale* of the operation of the division of the isthmus was that it limited the blood supply of the gland. He found it gave relief for the time and set the trachea free. As regarded the opening of the capsule he had no decided opinion, being unable in his operations to find out where or what it was; for, when he cut down on the diseased structure, he came on the gland covered by enormous veins, some as big as his thumb, and whether these were inside or outside the capsule he had not been able to determine.

The PRESIDENT said that thirteen years ago he had a case of acute goitre, and, at the suggestion of Dr. Purser, he had given five or ten grains of quinine three times a day, and in a week or ten days the growth

stopped. Happening to be with Sir William MacCormac in St. Thomas's Hospital he saw a patient with a tumor on the front of the neck that grew rapidly, and he mentioned the quinine cure. Sir William MacCormac tried it, and in fourteen days the growth ceased and the patient recovered.

Mr. Foy, in reply, considered that the operation was justified when the tumor was growing quickly, when dyspnœa or dysphagia was marked, or when any evidence of malignancy was present, and also when the most improved internal and external medication had not given good results. In the swampy districts of the Carolinas a malarial type of goitre was prevalent which was amenable to treatment by quinine; but the occurrence of such cases in this country must be very rare. Setons, tapping, and caustics were not free from danger, and in many cases did not give favorable results. As for Sir Morell Mackenzie's method of injecting perchloride of iron, he mentioned it only as a treatment most unsuitable and to be avoided.

SOUTH INDIAN BRANCH OF THE BRITISH NEDICAL ASSOCIATION.

Severe Injury to the Spinal Cord.—Brigade-Surgeon Sibthorpe related the case of a young man who was admitted into the General Hospital six days after a severe blow in the interscapular region, which was immediately followed by extensive paralysis. When admitted he was paralyzed in both upper and lower extremities; respiration was almost purely diaphragmatic, the accessory muscles of respiration also moving the upper part of the chest somewhat; there was anæsthesia below the nipple level, and in the upper extremities below the elbows. He gradually sank and died on the seventh day. A few hours before death the temperature began to rise rapidly, and finally reached 109° F. in the mouth. At the necropsy the anterior part of the body of the fourth cervical vertebra was found to be bruised, and the membranes of the cord were at this level injected; the cord appeared normal externally, but on section a patch of red softening, the size of a large pea, was seen in the centre, just below the third pair of cervical nerves. The cord appeared to be otherwise healthy. The internal organs were congested, especially the posterior border of the right lung.

THE CLINICAL SOCIETY OF MANCHESTER, ENGLAND.

Etiology of Pelvic Disease in Women.—Dr. Le Page read a paper on the etiology of those pathological conditions in woman which had their origin in the pelvis. The principal points in which woman differed physiologically from other females were considered. In the lower animals, the rut was short, the anti-rut long—that is, sexual activity was of short duration; sexual repose was prolonged. In woman, there was no interval during which the sexual passion was in abeyance. The life of a woman naturally divided itself into three periods: 1, the pre-menstrual; 2, the menstrual; 3, the post-menstrual; and many of the diseases of women may be traced to the first period, the whole of which was occupied in the development of the organs of sex. The causes of pelvic disease, operating in the period bounded by the maturation of the sexual organs and the decadence of generative functional activity, were then reviewed.

Hydronephrosis.—Mr. Bishop showed the kidney of a patient suffering from hydronephrosis, which he had removed a month before; also, a microscopical section of the degenerated renal tissue, showing the atrophied Malpighian tufts and tubules. The operation was post-peritoneal and extracapsular. Some collapse followed, but the patient made a good recovery.

FOREIGN CORRESPONDENCE.

MR. EDITOR: It is a fact that in Italy as well as in Germany, some of the best schools of medicine are not to be found in the large cities. Our ancestors probably were right in thinking that tranquility was a necessary thing to students desirous to penetrate the regions of science, and that their minds could better be concentrated upon their favorite studies in small centres, where distractions and enticements incident to life were to be far less found. This is especially applicable to Pavia, which, although being only a secondary city, possesses the most honored university of the kingdom. Milan, the capital of Lombardy, distant only one hour by train from Pavia, has a population of over 300,000 inhabitants, a magnificent hospital, and other sanitary institutions, and yet has no university. Padua, Pisa, etc., are only second and third rate cities, but their universities are world renowned.

My recent trip to Pavia gave me an opportunity to visit her great university, and my gratification was such that I concluded to send you this communication.

The city of Pavia has at present 35,000 inhabitants. Obscure as is her origin, it is said that it dates back many centuries before Christ; and, although now of not much importance, yet once she was the capital of an important republic, and the home of many emperors. The city itself cannot be called beautiful, but is situated upon the most fertile field of Lombardy, and is widely known for her celebrated university.

Records cannot be found to enlighten us on the origin of the university, but it is known that even before the ninth century the university of Pavia enjoyed a foremost reputation, and in the year 1361 it became officially recognized by a diploma of Charles VI granting the right to teach law, philosophy, medicine, and arts.

The present building is a large one, two stories high, with a frontage 185 metres long. It is divided inside by five large open court-yards, surrounded by five porticoes. Under the colonnades there are several inscriptions and monuments dedicated to some of the past illustrious teachers. On the first floor are situated the anatomo-pathological museum, the museum of normal anatomy, and the anatomical theatre. The latter is a well-lighted large hall, artistically painted, and was inaugurated by Scarpa in the year 1785. It contains an admirable bust of this great anatomist. Wide stairs lead us to the second story, similar in all particulars to the lower one. It is also ornamented with a fine internal colonnade, busts, and inscriptions. On this floor are situated the zoological museum, as well as that of comparative anatomy, of geology, and of mineralogy, and an excellent anatomo-pathological laboratory. Several lecture-rooms are situated here and there; the most admirable of these is that of physics. It contains the life-size statues of Galileus and of Cavalieri; also two bass-reliefs representing Europe with Newton's effigy, and America with Franklin's effigy. In this room Volta delivered his famous lectures, and a bust of him is placed on the wall in the centre of the hall, and bears underneath the following epigraph:

Alexander Volta
in re electrica princeps
vim raiæ torpedinis meditatus
naturæ interpres et æmulus.

Noteworthy in this university is the botanical institute. The laboratory is furnished with over thirty microscopes and several microtomes; has a rich collection of specimens of the vegetable anatomy and pathology; also several chemical and physiological apparatuses. The garden is supplied with about fifty thousand plants, and the library with over five thousand volumes.

The museum of zoology had its origin in the year 1775, in a rich collection donated by Spallanzani; in 1786 the Van-Hocq collection was added, and ever since it has

been constantly amplified to its present dimension. Many rare animals can be seen in this museum, and most characteristic is the collection of the lacustral pelagic fauna. All the genera and species are arranged as in the catalogues of the British Museum, and as Claus' classification.

The first specimens in the museum of comparative anatomy were prepared by the celebrated Scarpa (1782). A rich collection has been added ever since by his followers. The museum contains a fine collection of skeletons; also many specimens of the nervous system of the cuttle-fish and torpedo prepared by Scarpa; many embryological wax preparations and numerous animal monstrosities.

The institute of normal anatomy has great traditions. It is probably sufficient to name Carcano, Aselli, Scarpa, Porta, who have so much honored this institute and made it foremost in Italy as well as abroad. The number of preparations collected in the museum is 2,387, and are placed in four large halls. In the department of osteology there can be seen a large collection of skeletons of all ages (from 101 years down to two months of gestation); a collection of skulls of individuals of different races, or of a different anthropological type; a group of skulls of famous men, as of Scarpa, Volta, and others, who stood high in all sciences. In the department of angiology I saw four complete human statues and several special preparations; a grand collection of lymphatic injections made with mercury by Panizza. Notable are also two wax statues showing all the lymphatics of the body. Noteworthy are the historical preparations of Scarpa of the olfactory nerves, those of Panizza of the nerves of taste, and a large wax model of the organ of hearing, which received the prize at the London exhibition of 1862. In the department of embryology there were to be seen several injections of the fœtal and maternal cotyledons prepared also by Panizza. There was also an Egyptian mummy and the body of a man whose skin was as mottled with pigmented maculæ as the skin of a leopard. The theoretical teaching of anatomy in this university is triennial.

Experimental physiology has been taught since 1783, by Rezia, Jacopi, Hildebrand and others. The laboratory is well furnished with a complete armamentarium for vivisections, with several microscopes, electric batteries, saccharometers, spectroscopes, cardiometers, pneumathometers, etc., etc. Notable is also the collection of anatomical and histological preparations. The teaching in this branch is biennial.

The institute of general pathology and histology was founded in 1863 by Montegazza. Professor Bizzozero followed in in 1869, and since 1879 it has been under the direction of Professor Golgi. In 1884 there was added a laboratory for bacteriological researches, furnished with thirteen splendid microscopes, microtomes, etc.

The library of the university is worthy of special attention. Since 1754 it was recognized that a library was much needed, but it was not until 1772 that it was founded by Fontana. Haller's library was soon added to it. The celebrated Joseph Frank also bequeathed a large sum, and directed that the interest derived from it be employed to buy works on medicine and natural sciences, and that these be added to the library. Since then the library has been increased to the present large dimensions and importance by many donations from the government, citizens, and scientific institutions. The number of volumes is 120,000, with the addition of 70,000 pamphlets. Notable is the collection of historical works. Worthy of note are the anatomical tables of Bourgery, Cruveilhier, Blainville, Barkow, and those of Hebra on skin diseases; Mondino's Anatomy, edited in 1478; the medical works of Falcucci, published in 1481–84; the principal edition of Celsus' works, brought to light at Florence in 1478, and the little work of Cananus on the muscles of the human body, which is thought to

have been printed about the year 1541, and of which only four copies are believed to be in existence.

The teaching of materia medica was commenced in 1770, by Professor Borsieri, who at that time had to lecture on chemistry, pharmacy, and clinical medicine. The laboratory occupies five rooms, and the museum is supplied with a rich collection of medicinal substances, especially of exotic plants.

The museum of morbid anatomy occupies three rooms, and has about 1,600 specimens. In the laboratory are placed the specimens of pathological histology, and the reports of 7,614 autopsies. The teaching in this department is biennial.

Michel Rosa first taught hygiene in 1767. Among the illustrious teachers in this department mention must be made of G. Peter Frank, who wrote the first large treatise on hygiene.

The laboratories of medical jurisprudence, of general and pharmaceutical chemistry, are well provided with instruments, etc.

By looking over the history of the university I found that even in the fifteenth century Pavia was well supplied with eminent teachers. Among these I will mention A. Guaineri, who taught medicine in 1455, and Ferrari Dagrado, who read medicine and philosophy from 1432 to '72.

In the beginning of the sixteenth century the studies were interfered with by many wars, but these having ceased, the university soon regained her former glory. Of the teachers, I find the names of G. Cardano (1536), a most learned encyclopædian, who left many valuable works on medicine and mathematics. J. B. Leo Carcanus (1573), a reputed anatomist, whose observations, especially on the heart, we hear frequently spoken of in medical literature. Over three hundred auditors used to attend his lectures.

In the latter half of the sixteenth century horrible wars again broke out, bringing with them poverty and pestilence. A period of decadence then began for the university; all her former privileges were withdrawn, and the number of students diminished considerably. Of the teachers who upheld the old noble traditions of the Pavesian school, we must remember the modest Gaspar Aselli, the discoverer of the lacteal vessels, who taught anatomy in the year 1624. His discovery dates anterior to that of Harvey's on the circulation.

During, and since the eighteenth century, the university gained in honors and students, and had as teachers men who stood high in science and letters. Among these:

L. Spallanzani, called to the chair of natural history in the year 1769. His studies and experiments marked a new era in physiology. By numerous experiments on artificial fecundations he cleared the way for an understanding of the fundamental laws of generation in vegetables as in animals. He discovered the white blood-corpuscles in the salamander and in frogs; and was the first to study artificial digestion. Besides all these, he made many important researches, in the groundless belief of a sixth sense of the bats, on the respiration, circulation, on the phosphorescence of the sea, and on the volcanic phenomena; all of which greatly increased the patrimony of science.

G. A. Scopoli held with honor the chair of chemistry and botany from 1776 to 1788. He studied the metals, the fossils, and the insects. Many plants, which he classified, bear yet the same name given by him.

L. V. Brugnatelli followed Scopoli in 1788. He discovered the suberic acid, the erythric acid, the fulminating silver; he also deserves the credit of discovering uric acid in the excrements of the silk-worm; and we owe to him the first observations on galvanoplastic. He wrote a reputed treatise on chemistry and materia medica, and honor is due him for the great zeal with which he promoted the diffusion of chemical studies in Italy and abroad.

Alexander Volta, who had already become famous for the discovery of the

electrophorus and for his researches on the electrical capacity and on the inflammable gas, was elected professor at Pavia in 1778. Here he invented the electric condenser, made numerous studies on the atmospherical electricity, and in January, 1800, he constructed the pile. This great man, worthy of the highest place in the history of civilization, left the chair in 1813, and died in 1827. A life-size marble statue of him can be seen in the centre of the western court-yard.

Peter Moscati held the chair of anatomy from 1764 to 1772, and improved with much zeal the anatomical studies which had been much neglected. He held that there was no substantial difference between the inferior animals and man, and that the primitive posture of man ought to have been that of a quadruped. He was made a count and a senator by Napoleon I, and received many special favors.

Antonio Scarpa was called to Pavia in 1783. The university owes to Scarpa the celebrity of its anatomical and surgical school. Here he made his discoveries on the organ of hearing; he described minutely the olfactory nerves and the anterior nasal nerves; he illustrated the topographical anatomy of the limbs, teaching the rules for the ligatures of the arteries; he studied the diseases of the eyes, demonstrating how the clinical observation must be based on the anatomy; and lastly wrote two works on hernia and on aneurism which have remained classic.

S. A. Tissot taught practice of medicine in 1781. He wrote important works for those times, on nervous diseases, on onanism and sexual diseases, which made his name popular.

G. Peter Frank succeeded Tissot in 1785, and was much honored for his learning.

Joseph Frank took his father's place in 1795. He followed for a time Brown's theories, but soon abandoned them.

V. L. Brera followed. He diffused vaccination, and wrote a grand work on worms and their diseases, which was translated into all the principal languages.

In the year 1797 G. Rasori was called to the chair of clinical medicine. Forgetting that the observation of facts is the only basis of science, he permitted himself to be deluded by the simplicity of philosophical speculations and founded the famous "contra-stimulant" method, which consisted in bleeding and the use of tartar-emetic. His teaching was bitterly fought, so much so that after a year he was obliged to leave the chair.

Vincenzo Malacarne, already famous for his surgical works and for his excellent anatomical observations on the nervous centres of man and animals, was elected professor of surgery and obstetrics in the year 1789. He wrote a much honored treatise on "Exploration as a fundament in the obstetrical art."

Bartolomew Panizza, Scarpa's pupil, was elected professor of anatomy in 1815. He paid much attention to ophthalmology, and published a valuable essay "On the medullary fungus of the eye and on the depression of cataract." He gave an original description of the lymphatics of the genitals, demonstrated with mercuric injections. He also showed the absence of the vessels in the skin, and confuted the pretended Lippi's discovery, who taught that the lymphatics opened in veins. Later, he accurately described the lymphatic system of reptiles, and made known the inter-aortic opening of crocodiles, named by Brücke *Foramen Panizzæ*. In his experimental researches on nerves he discovered the function of the spinal roots, and demonstrated the functions of the glosso-pharyngeal nerve. Worthy of attention are his teratological observations, as well as his researches on the marine lamprey, in which he found the sexual demorphism and many other anatomical facts; also his experimental researches on the optic nerve; and many other studies, as on the gravid uterus. In 1860 he was elected senator; in 1864 he left the chair, and died in 1867. To

perpetuate the memory of such a worthy teacher a fine statue was erected to him in 1873, and it can be seen under the internal colonnade of the university; but a far more durable monument was built by Panizza himself in his works.

Mauro Rusconi's name will also forever be known for his great discovery, in 1826, of the segmentation of the ovum, and other important studies on embryology.

Frank Flarer taught ophthalmology in Pavia from 1819 to 1859. Hirsch names him as a worthy representative of the Vienna school in Italy.

F. S. Hilderbrand taught clinical med icine from 1817 to 1830, and studied the means to combat the pellagra.

T. Lovati held the chair of obstetrics from 1827 to 1848. He introduced in Italy the artificial premature labor, and was the first one to use auscultation in obstetrics.

Luizi Porta held the chair of surgery for forty years. His reputation as a surgeon and an anatomist was, and is yet to-day, widespread throughout the world. His memory is also perpetuated with a beautiful statue placed under the colonnade. He bequeathed all of his large fortune to the university fund, besides a fine collection of 260 preparations of surgical anatomy, and over 1,400 preparations of surgical pathology. All these are placed in three large rooms under the name of Porta's Museum.

Among the living who have made im portant studies at this university, and have held chairs, adding much glory to this already famous atheneum, the following are worthy of special mention :

Salvator Tommasi, who taught clinical medicine from 1859 to 1864. He held constantly in his lectures that the duty of the physician is to study the sick man as a physiologist studies a sound organism ; that disease is not a new being with different laws governing the organism, but only a deviation in the typical progress of the organic laws. He is at present at Naples, much honored and admired.

Paul Mantegazza taught experimental pathology from 1860 to '69. He did in this institution much of his scientific work on the spermatic fluid, on the genesis of fibrine, on the persistency of vibriones in boiled liquids, on animal inoculations, on the temperature of urines, etc. He has been, and is to-day, a prolific writer. His writings on hygiene, travels, and many physiological and philosophical works, are universally read and admired.

C. Lombraso taught psychiatrics from 1864 to '76. He advocated with energy the necessity of the study of anatomy in mental diseases, and was the founder of criminal anthropology. He is now in Turin.

The name of G. Bizzozero is much esteemed at home as well as abroad. He taught general pathology from 1869 to '72, and during that time he completed a series of studies on the structure of the pineal glands, on the marrow of bones, on the histology of epithelia, etc. He now holds the same chair in Turin, where he continues his observations with much conscien tiousness. His last work on clinical microscopy is generally read, and has been translated in all the European languages.

Who doesn't know or at least has not heard of Arnaldo Cantani? This illustrious clinician commenced his scientific career at this university, and he did much to found and diffuse in Italy the scientific method in the clinique. He is now connected with the University of Naples, where he holds the highest place as a teacher and clinician.

E. Porro taught obstetrics for many years. Here he performed the classic operation of utero-ovarian amputation which bears his name. He has retired to private practice in Milan.

All the clinical teaching at this university is imparted at St. Matthew's Hospital. This hospital was built in the year 1449, hence it has many defects consequent upon the

manner of building in those old times; but in these later times many additions have been made, and the old part has been remodeled to coincide with all the requirements of the modern progress of hygiene. The hospital is sustained by revenues of trust funds which reach the sum of nearly a million of francs. The hospital has a fair library, due to the generosity of Professor A. Brambilla, who also donated a complete armamentarium of surgical instruments. In these later years the medium mortality has been ten per centum in the department of medicine and six per centum in that of surgery. The diseases which have made the mortality so much in surgery are mostly gangrenous erysipelas, inflammations and vast suppurations.

Recently there has been instituted in this hospital a school for nurses with good effect. The teaching consists in the elements of anatomy, physiology, surgical help, the manner of assisting patients, dietetic régime, some idea of diseases, on hygiene, etc.

The medical clinique has been in charge of Professor F. Orsi, since 1865. The fifth and sixth year students only attend this clinique, which is situated on the ground-floor of the hospital, and is divided into two large rooms, each holding thirty beds.

The surgical clinique was, until last September, in charge of Professor Henry Bottini, who gave up his clinique, having been elected a member of the Italian parliament, a fact much regretted by the profession which loses a most eminent clinician and surgeon. All the operations are performed in the surgical amphitheater of the hospital, which is adorned with inscriptions, two marble busts of Scarpa and Brambilla, and a beautiful collection of instruments; of these are worthy of mention those for operations on the urinary passages, those for the galvano-caustic operations, much improved by Bottini, those for diseases of the osseous system, and a most complete armamentarium for hemostasis. Over two hundred capital operations are here performed every year, such as removal of goitres, sarcomata, lymphomata, amputation of the tongue by a special method, resections, etc. This clinique is also provided with ample laboratories for histological and bacteriological researches.

There are several other cliniques here, but time and space do not permit me to give any detailed account of them. As the reader will see, this university has a splendid history, and its renown will increase in the future. Here, as in other Italian institutions, much scientific work is done, which, if this fact were made known, as is done in other nations, would divert in in this direction not a little of the travel of medical students who go abroad for advanced professional instruction. But the time will come when students and physicians will avail themselves of the fine opportunities offered in this beautiful sunny land, where, besides the excellent clinical instruction, the sojourn will be made far more profitable by the pleasant surroundings, charming climate, arts, music, language, and the courtesy which so much characterizes the Italian nation.

The corner-stone of a new Polyclinic was laid on the 19th of January at Rome. The King performed the act in the presence of the Queen, the Prince-heir, and all the prominent officials of the capital. Professor G. Baccelli, the originator of this new institution, made a brilliant address. Honor is due him for having conceived the idea to harmonize school and recovery, learning and philanthropy; and to place at the disposal of medical science a union of several clinics, to benefit science while benefiting charity. This institution will be erected upon the plans of architect G. Podesti; and the area of ground on which this great work is to be situated is just outside of the celebrated Porta Pia, where, eighteen years ago, the Italian army, after a sharp resistance, made a grand entrance into the new capital. The area is surrounded by boulevards thirty metres wide, and which measure 160,000 square metres.

The main building, in which are to be located all the offices, store-rooms, warden's residence, etc., is situated in the centre and in front. From this there will extend several galleries by which it will communicate with the other buildings. The main frontage will measure 560 metres long, and 300 metres deep. In all there will be over forty pavilions. A wide underground gallery will be used for the removal of cadavers to the dead-house, and also of all the clothes to the laundry. Above this gallery there will be a portico to communicate with all the infirmaries. The medical and surgical clinical wards, with the annexed hospital, will be situated on the side of the main building. Special pavilions for infectious and contagious diseases, as well as the dead-house and laundry-rooms, will be built in the corner farthest from the centre of the area. These will be reached only by underground galleries, with a view of avoiding infection. The balance of the ground will be changed into a beautiful garden.

It is intended to make it, when erected, the largest and the best equipped institution devoted to medical teaching in Italy. It is to be hoped that it will meet all the requirements of modern sanitary science, and, as the first one of the kind, be an honor to Rome and Italy, and thus be a glorious page added to the history of the Eternal City. A. LAGORIO, M. D.

GENOA, ITALY, February 7, 1888.

ABSTRACTS AND EXTRACTS.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting was held in Lansing, January 10, 1888. The members present were Hon. John Avery, M. D., President; Professor Victor C. Vaughan, M D ; Arthur Hazlewood, M.D.; J. H. Kellogg, M. D.; and Henry B. Baker, M. D., Secretary.

MICHIGAN STATE LABORATORY OF HYGIENE.

Professor VICTOR C. VAUGHAN, M. D., made his first Quarterly Report of the Michigan State Laboratory of Hygiene, of which Professor Vaughan is Director. This complete report is to be published in the Annual Report of the State Board of Health for 1887.

Professor Vaughan's report includes three subjects:

(1) The important results of the investigations into the causation of typhoid fever, stating the details of the experiments whereby the "germs"—the bacilli of typhoid fever—were proved to be in the water supposed to have caused the typhoid fever at Iron Mountain, Michigan, in October, 1887; and whereby, through the injection of the "germs," a disease in some respects similar to typhoid fever was produced in an animal, and, through injection of a ptomaine formed by the germs and chemically separated from the germs, an abnormal rise of body-temperature was produced in an animal.

(2) The complete account of the four cases (three fatal) of tyrotoxicon poisoning near Milan, Michigan, in September, 1887, and the experiments indicating that the poison may be generated in soil saturated with decomposing milk.

(3) The investigations which exposed a fraud which was putting into the hands of pharmacists and physicians a drug claimed to be a harmless product of the honey-locust tree, but which was found to be a dangerous mixture of cocaine and atropine.

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The Secretary of the Board was instructed to send circulars and blanks to the health officers of all cities and villages in Michigan urging a sanitary survey, a house-to-house inspection, next spring, and asking the health officers to mention the subject in their annual reports to the common councils or other local boards of health.

DIFFICULTIES IN THE RESTRICTION OF COMMUNICABLE DISEASES.

In efforts for restricting communicable diseases, the Secretary read a letter which

had been received during the quarter, saying that considerable trouble is experienced in preventing the spread of diphtheria, from the fact that some physicians will not report cases that come under their care, and claim that there is no diphtheria, whilst other physicians pronounce simliar cases to be true diphtheria.

In response to the communication, a letter was sent from the office of the Board, stating that the safest way would be to consider every case of sore throat, in a locality where diphtheria prevailed, as suspected diphtheria, and to distribute pamphlets (issued by the State Board of Health) on the restriction of this disease to all the neighbors of those sick. In that way that class of physicians who do not regard the public health will not be depended upon to control public opinion, but after a time will be controlled by public opinion.

The local board of health in this locality in which diphtheria so prevailed was advised to meet and pass a resolution, which should stand as one of the "regulations" of the board, that in all cases of inflamed throat the local board of health, acting on the advice of the State Board, would require physicians and householders to report said cases to the health officer, in order that precautions might be taken, as in cases known to be diphtheria.

It was pointed out that, while diphtheria is, as a rule, *fatal to children* only, it is *spread* frequently by cases in *adults*, because they are not sufficiently well marked to make ordinary people believe they are diphtheria.

In all cases of sore throat precautions should be taken.

The following resolutions were adopted by the Board at that meeting:

Whereas, it is often difficult to recognize mild cases of diphtheria, or to distinguish such cases from a simple tonsilitis, pharyngitis, or larnyngitis, and

Whereas, such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria:

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case, to give to the public safety the benefit of the doubt, and in localities where diphtheria exists to regard cases of acute sore throat as suspected cases of diphtheria.

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

INFLUENCE OF DRESS ON RESPIRATION.

Dr. J. H. KELLOGG presented facts and memoranda of a paper, entitled, "The So-called 'Female Type of Respiration' the Result of Improper Dress, as Shown by the Study of Respiration in Indian and Chinese Women."

This paper embodies the results of the study of respiration in nineteen Chinese women, fifteen Indian women, and more than one hundred civilized women, by the aid of the pneumograph. The results show:

First. That there is but one normal type of respiration in human beings, contrary to the views held by our leading physiologists, who assert that normal respiration in adult women is costal, while in males it is of the abdominal type.

Second. That the so-called "male," or abdominal type of respiration, is the normal type for both men and women when the movements of the chest and abdomen are not restricted by improper dress.

Dr. Kellogg was requested to complete the paper for the annual report of the Board.

THE DRY-CLOSET SYSTEM OF DISPOSAL OF EXCRETA.

The committee appointed for the purpose of investigating the Smead System of Dry Closets as used in connection with public schools, reported that it had visited several school buildings and carefully examined the system of dry closets in use in them. In all but one building the working of the system appeared to be very satisfactory, the outside temperature being such as to insure good draft in any heated building provided with an efficient system of ventilation. In one building the odors present in the base-

ment were, when it was first entered, exceedingly foul, the odors coming chiefly from the urinal. It was necessary to open the basement windows to clear the room, even in part, of the odors present. The fæcal matter of the vaults was, in two of the buildings visited, nearly dry; in the building referred to above it was in a highly putrescent condition.

The committee also visited a school building in Detroit in which this system had been recently introduced, but had not been long enough in use to enable us to judge of its efficiency. The conclusions reached by the committee were as follows:

1. The dry-closet system, as introduced in connection with the Smead-Rutten system of ventilation, with a sufficiently strong and constant draft, presents features of economy and conveniences which render it worthy of investigation.

2. The apparent success of the system is wholly due to the efficiency of the system of ventilation in connection with which it is introduced.

3. The system presents several features, however, which do not commend it to sanitarians, and which certainly suggest a further study and observation of the system before it can receive scientific indorsement.

a. There is always a possibility, and under some circumstances, as during the prevalence of adverse winds and in hot weather, a probability, of an interference with the ventilating system, by which fæcal odors may be carried, by a back-draft in the foul-air ducts, into the school rooms.

b. The system does not provide a satisfactory method of caring for the boys' urinal.

c. In the light of the most recent researches, the drying of fæcal matters, which is supposed to occur in the dry vault, does not destroy the germs of disease which may be contained in them; and the scattering of these germs, through their discharge into the open air, may be conducive to the wide dispersion of the infectious elements of diphtheria, typhoid fever, and, possibly, other grave maladies. This danger would, of course, be greatly aggravated in times of epidemics of any of these diseases.

4. On the whole we are obliged to express the opinion that the dry-closet system is not in the line of the best sanitary progress.

The committee wished especially to call attention to the fact that their inquiries thus far have been prosecuted at a season of the year when this system would necessarily appear at its best, and when its dangers and disadvantages are least likely to appear; and on this account they desired to withhold their final and complete report upon the dry-closet system until they shall have had opportunity to observe its working during the warm season of the year.

DANGERS IN GASOLINE.

Dr. J. H. KELLOGG, who had been appointed a committee to investigate the dangers in gasoline, made a report, embodying facts which he had collected, and including the views of leading insurance agents, etc., concerning the dangers in the use and storing of gasoline, and giving rules to be observed in handling this substance, declared to be "more dangerous than gunpowder." The report is to be published in the annual report of the State Board of Health for 1887.

CONTAGIOUS DISEASES.

Compared with the preceding quarter (July, August, and September), reports received from all sources show the number of places at which diphtheria was reported to have increased by an average of eight places per month, scarlet fever to have increased by an average of nine places per month, typhoid fever to have decreased by an average of two places per month, and measles to have increased by an average of one place per month. One case of smallpox was reported in each quarter.

METEOROLOGY, AND SICKNESS FROM ALL CAUSES, COMPARED WITH THE PRECEDING QUARTER.

A comparison of the meterological conditions of the fourth quarter of 1887, with the meteorological conditions of the third quarter, shows the temperature to have been much lower, the absolute humidity and the day ozone less, the relative humidity more and the night ozone slightly more in the fourth quarter of 1887.

Compared with the preceding quarter (July, August, and September), the reports received from regular observers show a marked increase of pneumonia, bronchitis, influenza, tonsilitis, scarlet fever, diphtheria, rheumatism, and consumption of the lungs, and a marked decrease of diarrhœa, cholera morbus, dysentery, cholera infantum, intermittent fever, and whooping-cough in the fourth quarter of 1887.

THE MEDICAL CORPS OF THE UNITED STATES NAVY.

In the *Reference Handbook of the Medical Sciences*, Medical-Director A. L. Gihon, of the United States Navy, says:

Admission into the medical corps of the navy can only be obtained through a professional examination before the naval medical board, composed of officers of the higher grades. From the beginning this board has assumed to be the sole judge of the qualifications of candidates, the mere possession of the diploma of a medical school not being recognized as even presumptive evidence of professional abilities and acquirements. Inquiry is first made as to whether the candidate has received a liberal education, which is properly considered an indispensable pre-requisite to an intelligent comprehension of the science of medicine. An autobiographical sketch, an essay on some assigned professional topic, and written answers to a series of comprehensive questions in the various departments of medicine, are intended as evidences of such preliminary proficiency, the orthography and punctuation, grammatical construction, form, and manner of expression being as carefully scrutinized as accuracy of statement. An oral examination follows by the several members of the board, in the presence of all, upon every branch of medicine and upon such collateral studies as the candidate may have pursued, with the object, not merely of ascertaining the amount of detailed information he may have acquired by rote, but rather the extent of his intelligent understanding of the fundamental facts and principles which constitute the science of medicine. Finally, extemporaneous chemical and pharmaceutic exercises, the clinical diagnosis and treatment of actual patients in hospital, the adjustment of surgical apparatus and appliances, and the performance of operations upon the cadaver, exhibit his acquaintance with the practical requirements of the healing art, and his fitness to assume its responsibilities under the emergencies which sometimes place the issue of life or death upon his unaided knowledge and skill.

Manifestly, such a course of examination, written, oral, and practical, adequately determines whether the candidate has received a proper education in medicine, and the examination is only such as should be exacted of every aspirant for a doctor's degree, and such as can be hoped for only when boards of examiners shall be instituted entirely independent of teaching faculties. A second examination, after a lapse of three (formerly five) years, is required for passing out of the grade of assistant surgeon preliminary to promotion to that of surgeon. This examination presupposes a wider practical acquaintance with the various branches of medicine and a familiarity with its current literature. Similarly, in civil life, it would be well if the graduate should first receive only a baccalaureate degree (M. B.), and as an incentive to application and study have the M. D. before him as the reward of a second examination five years later. But the interest of the bureau of medicine and

surgery in the young naval medical officer does not cease with this final examination. Opportunities for self-improvement are liberally provided, and individual research and investigation are encouraged by the supply of apparatus, instruments, or other facilities required, and by the publication of essays voluntarily contributed, as well as by the requirement of annual statistical, medical, and sanitary reports from every officer in charge of the medical department of a vessel or station, embracing the medical topography, climatology, and hygiene of every station or place visited, with all attainable information respecting statistics of disease and its causes, establishments for the care of the sick, charitable institutions, medical colleges, and other matters of professional interest. Again, in civil life, this might be paralleled by the more general employment of young men as salaried attachés of hospitals, dispensaries, asylums, infirmaries, cliniques, and other eleemosynary medical institutions, where, under the supervision of older men, that experience might be acquired which alone justifies any one in accepting the responsibility of human lives, and where similar provisions for professional research might be afforded, which are not possible in a young graduate's meagrely-appointed office.

The medical officer of the navy having passed the rigorous examination for admission, is made to understand at the outset of his career that his first duty, as a physician, is to protect the community in which he is established from the ravages of disease; and herein the medical corps of the navy merely exemplifies the real mission of the medical man in every walk in life—to place those who are under his care in the best possible sanitary condition, to jealously guard against the operation of preventable causes of disease, to antagonize the morbific agencies that elude their vigilance, or find access by inscrutable ways, and thus to reduce to a minimum the necessity for therapeutic measures; and finally to use natural agencies for purposes of cure wherever these can replace pharmaceutic administration.

The sanitary supervision of a community like the navy is much simplified by the preliminary physical examination of all the men and boys—adults and adolescents—who enter it, and by their compulsory subjection to regulated habits in food, drink, personal cleanliness, etc. The immature and the very old, the weak and decrepit, women with their special train of ailments, and those predisposed to disease—classes which in civil life outnumber all the rest—are excluded from enlistment. Still, it is within the province, as it is the duty, of the civil practitioner, to inculcate, far more strongly than he does now, hygienic principles, and to enforce restraints, as in preventing the marriage of individuals with transmissible taints.

QUARANTINE DOES NOT DEAL WITH THE MOST DANGEROUS DISEASES.

In a report made to the Michigan State Board of Health, the Secretary, Dr. Henry B. Baker says: Relative to the persons who brought scarlet fever to Sutton's Bay, Michigan, and who came on the S. S. Ohio, reaching New York September 30, 1887, Dr. Wm. M. Smith, health officer of the port of New York, says: "Developed cases of diphtheria and scarlatina arriving on vessels at this port are removed to Ward's Island. It is impossible under the law for the health officer or the authorities at Castle Garden to quarantine persons who have been exposed to the contagion of those diseases; consequently the sick on board vessels during the voyage, doubtless often infect the relatives or those with whom they come in contact * * * and who carry the latent contagion to interior communities. I would be glad if the law allowed those exposed to the contagion of these diseases to be held for observation as is the case when persons are

exposed to the contagion of small-pox." The instance mentioned above is an illustration of what Dr. Smith says—the child having been exposed during the voyage and taken sick with scarlet fever the day after arrival at New York; so the infected child went on its way to spread scarlet fever. In Michigan, at least ten times as many deaths occur from either scarlet-fever or diphtheria as from small-pox. Is it not time that the whole subject of quarantine was investigated by the States and by the United States Government, with a view to protecting the people of this country from the introduction of the really dangerous diseases?

FOGS AND THEIR EFFECTS.

It is but a small consolation to the millions of people whose respiratory function is distressed, and whose general health and comfort are interfered with by the fogs which have lately prevailed, to know that they are attributable to this or that meteorological condition of things. A marked difference is found between fogs over the sea or country and those observed in large towns, the former being, as a rule, whiter, more moist, and distinctly less irritating to the mucous membranes than the latter. This is doubtless to be explained by the fact that in towns the particles of water of which the fog is composed take up the sulphurous acid, ammoniacal vapors and other atmospheric impurities poured out by the countless chimneys of the metropolis until they give rise to almost unbearable irritation when brought into contact with the mucous membranes of the eyes, nose, and lungs. The "drier" the fog the more marked is this property, and the effects on the mortality tables is correspondingly more pronounced. The fog which enveloped London all last week in its sable mantle was remarkably moist, and therefore less irritating. When of some duration, the evil effects of the peculiar power possessed by masses of moisture to check the dissemination of vapors become very evident. The denizens of cities experience, in a more or less marked manner, all the symptoms of carbonic acid poisoning superadded to those due to a diminution in the supply of oxygen. In London, no sooner does the fog swoop down upon us than we begin to choke and experience the various unpleasantnesses incidental to partial asphyxia. The country fog is positively refreshing after a few hours in town, both morally and physically. Unfortunately, in addition to the swollen death-rates from disease we have to lament an appalling number of fatalities due directly to the interference of fog with vision and sound.—*Medical Press and Circular.*

AN EXTRAORDINARY INJURY.

The infliction of fatal injury to the brain by the thrusting of pointed objects beneath or through the upper eyelid, through the orbital plate into the brain, has occurred a number of times. Baby-farmers have been known to procure the death of their charges by pushing needles in, and not long since an irascible "fare" thrust his stick some four inches into the brain of a cab driver in the same way. The effect of such an injury is generally very prompt, and within an hour or two—even if not at once—serious symptoms manifest themselves. A curious exception to this rule was the subject of an inquiry last week at the London Hospital, the victim being a commercial traveler 32 years of age. Until the last few weeks the deceased is stated to have been in good health, and to have kept a set of books most accurately. He was admitted into the hospital complaining of a pain in his head, and feeling drowsy. On the 10th inst., symptoms of apoplexy (?) appeared, and he died a few hours later. On making a post-mortem examination of the brain, an abscess the size of a turkey's egg was discovered at the base, evidently not of recent formation, inside which was a penholder and nib, measuring altogether some three inches in

length. This foreign body must have been in its position for some considerable time, it being imbedded in bone. No trace of injury to the corresponding eye or nostril could be detected. The widow of the deceased had never heard him allude to any injury of the kind, and it is quite unknown how and when it was inflicted. The pen and nib were of the ordinary school pattern, and there is nothing to show that the injury was not inflicted years ago when the deceased was at school. Altogether, it is a very remarkable case and demonstrates the extreme tolerance of the brain to a very serious injury, and to the presence of a foreign body under certain circumstances. It is fortunate, in one sense, that the deceased died in a hospital; in private practice his death would have been certified as due to apoplexy, or, in case of an inquest, to "visitation of God."—*Medical Press and Circular.*

GUY'S HOSPITAL REPORTS.

Volume XLIV, 1887—edited by N. Davies-Colley and W. H. White—contains, as usual, many valuable papers by different writers. Of some of which *abstracts* have been prepared for the *Journal and Examiner*. They are of sufficient general interest to the profession to merit special mention.

W. Arbuthnot Lane, M. S., in a long article on "The Causation, Pathology, and Physiology of several of the Deformities which Develop during Young Life," attempts to consider more particularly the causation and pathology of the deformities, because he believes the accepted teaching largely incorrect in regard to these points. He says that "*the surgical pathologist has but too frequently mistaken the cause for the effect*," and "*therefore it is of much importance, as regards treatment, that we should obtain as thorough and as complete a knowledge as possible of the factors which determine the development and progress of deformities, and of the influence exerted by each.*"

Among the supposed factors in the causation of knock-knee which the author considers incorrect, are—

1. Yielding of the internal lateral ligament.

2. Union at an early date of the outer portion of the lower epiphysis with the femur.

3. Contraction of the biceps tendon.

These the author thinks are effects, not causes, and that the real cause of the deformity is "the habitual or very frequent assumption of the position of rest of that joint."

The discussion of flat-foot occupies twenty-six pages. The author considers rotation of the os calcis inwards the chief determining factor in this deformity. The first factor which is solely and primarily responsible for the condition is a general want of tone and vigor. The discussion of this deformity is extremely technical, and the suggestions for treatment are along the line of the anatomical conditions present, and so full of detail that a condensation cannot do them justice.

Twenty-five pages are given to deformities of the spine. Attention is called to the fact that a direct backward displacement of the shoulders will effect but little change in the deformed column in cases of excurvation, and yet, this displacement, and one also slightly downward, are the only ones exerted by the braces usually constructed for these cases. The effect desired is to displace the weight of the head and shoulders as far backwards as possible. "This can be done by simply approximating the shoulders by means of powerful elastic bands attached to shields encircling them."

"In the case of the young female in whom we suspect the presence of sacral deformity we may develop a tendency to its removal by powerfully over-extending the hip and sacro-iliac joints by placing a large sandbag beneath the pelvis when the patient is occupying the supine position." In a case of typical dorsal excurvation developed during growing life the author

discovered the following described anatomical peculiarity in the dissecting room, "developed in the lower part of the ligamentum nuchæ, and intimately connected by ligament to the prominent spinous process of the seventh cervical vertebra, a conical piece of bone about an inch and a quarter long. This peculiar pathological condition lends additional weight to the claim that in these cases there is a special strain upon, and consequent marked hypertrophy of, the ligamentum nuchæ."

The opening remarks in what he has to say about lateral curvature of the spine, represent so clearly the author's theory of the formation of all of these deformities acquired during young life that they may well be given here in full.

"As we analyze the changes that take place in this deformity, I think we shall arrive at the same conclusion as we did when studying the several previous deformities, namely, that there exists a natural tendency to the formation of each, since it is but the *fixation and subsequent exaggeration of a movement which is a normal one when the subject occupies the position of rest.*

"A feeble subject, such as I have already described, assumes habitually such attitudes of rest, and it is the very frequent and prolonged retention by such a person of any portion of the skeleton in its normal position of rest (that is, one which demands the smallest possible expenditure of muscular energy) that determines the permanent retention of what is normally a physiological transitory movement, and later, its progressive exaggeration. I believe that I shall be able to show that the temporary assumption of the double lateral curve by the spinal column is a normal physiological attitude, and a position of rest; that, like all positions of rest, it is most marked in the feeble subject, and that it only becomes a deformity when it remains as a permanent curve, and ceases to be recoverable in exactly the same way that a flexion of the dorsal spine is also an attitude of rest, and only becomes a deformity when it does not disappear after rest but remains permanent as a dorsal excurvation. I would point out here that the position of simple flexion of the dorsal spine, with the associated changes in the curvation of the rest of the column, is not usually assumed as a posture of rest till a period of growing life later than that in which lateral curvature develops. I will divide my case up into two headings. I wish to show—

"Firstly, that the double lateral curve is a position of rest, and consequently one which is assumed habitually by feeble children for long periods of time; and

"Secondly, that the so-called rotation of the vertebræ around a vertical axis is part and parcel of this normal and physiological process of lateral flexion; that there is nothing mysterious or obscure in the mechanism of its causation; that it is not a change which develops subsequently to that of lateral flexion, and that it is not due to any change in the form of the articular processes, or to any abnormal development of the component parts of the vertebræ on either side, but that the alteration in form which the vertebræ undergo is secondary to, and consequent upon, their movements upon one another."

The article also includes discussions of Acquired Deformities of the Toes, and Rickety Deformities. The entire article is worthy of the careful attention of all interested in orthopœdics. It is markedly original in many ways, and evidently based both upon large practical clinical experience, and unusually ample observation in the dissecting-room of the classes of acquired deformities discussed.

G. Newton Pitt, M. D., reports a case of Friedreich's Disease, of which we give here a very much condensed résumé. *Family history:* Father died of Bright's disease after a three month's illness. Mother was affected with chorea at ten years of age, but completely recovered. The patient is one of seven children. Three brothers are affected as the patient is, one less, and two

more so. One sister is also worse than the patient.

In all of the cases in this family, the ataxic symptoms began at the age of fourteen to fifteen years, being worse in the legs than in the arms, and steadily increased. One of the brothers has two healthy children, the eldest of whom is ten years of age. In none of these cases have shooting pains, double vision, numbness, nor pricking sensations been present. Two brothers and his sister have suffered with weakness of the spine, and two brothers have some curvature. They are all rather pale.

The patient was first admitted at *Guy's*, May 14, 1887, and was then twenty-one years old. General health good. Seven years ago he became unsteady in his gait, and in consequence of uncontrollable movements and twitchings of his limbs, became unable to take part in games. No evidence of sudden fright or intestinal disturbance. *Present condition:* A well-nourished man, five feet ten inches high, red hair, weight 131 pounds. Tongue protruded naturally, but retracted with a jerk. Heart, lungs, liver, and spleen normal. Choreic movements are most marked when patient is in bed, and consist of a sudden jerking up of the knees, side to side movements of the feet, with pronation and supination of the forearms. When sitting up there is an occasional twist of the trunk, and, at times, twitching movements of the mouth and of the head occur. He has difficulty in rising from or sitting down upon a chair; sways to and fro when standing up, and his gait is somewhat that of a drunken man. When his eyes are closed, he is unable to touch the tip of his tongue readily. All of these symptoms are more marked when he is watched. There is no loss of muscular power. The movements are not unilateral, and cease during sleep. Has no shooting or girdle pains, no numbness in the feet. He can not stand with eyes closed and toes together. Touch and temperature sense normal. Patient remained in the hospital until December 13, 1877, and took cod-liver oil, arsenic, and at last phosphorus. Was re-admitted February 22, 1878. Up to January 15, was able to act as cashier, walking to and from work. In January, took cold, had severe cough with free expectoration. About this time, the ataxic symptoms became so bad that he could not feed himself, and he could not stand alone, and he had "flashing" pains through knees, ankles, and feet. These pains are not now present; he has lost flesh rapidly, and eyesight is dim, but he can read near and distant print well. Speech is jerky, articulation indistinct. Tongue, when protruded, is unsteady. On trying to grasp anything, the movements are unsteady, but after three attempts, he wrote his name fairly well. Has full strength in legs, but can not stand alone. In walking, the heels strike the floor first. Plantar reflexes present, sensation normal in feet and legs. Patient went home March 18, 1878, able to walk when fairly started. Re-admitted July 13, 1881. Since he has been out, has not been able to work or walk about much. A fortnight ago, he had an attack of diarrhœa, and his ataxic symptoms became much worse. *Condition on admission:* Even with his eyes open, he is unable to stand alone. When supported, he walks a few steps, shooting his legs out sideways, and bringing them down forcibly. With eyes shut, he can not touch his nose. No wasting of limbs, or loss of power, no knee-top or ankle clonus. Tongue protruded straight and steadily. Voice normal, but speech resembles that of first stage of intoxication. Sensation perfect, no numbness. All abnormal symptoms worse when he is out of sorts or tired, special organs normal.

The patient was discharged and re-admitted several times, the ataxic symptoms described gradually increasing, and he finally died at home, rather suddenly, March 21, 1885. Excepting the spinal cord the only changes of interest found at the section were a widely distributed obliter-

ative endarteritis of the smaller arteries, with extensive chronic endo-myocarditis. A very elaborate description is given of the cord, accompanied with a lithographic plate, and followed by a condensed summary which we give in full.

1. The spinal cord is extremely small.

2. Extreme sclerosis, amounting almost to destruction of the columns of Goll, traceable from the lumbar enlargement to the floor of the fourth ventricle, where it terminates.

3. Severe sclerosis of the posterior part of Burdach's columns, in which, however, single healthy fibres are scattered; these are more numerous in the upper than in the lower part of the cord, where they are very exceptional. Slight degeneration is visible in the fasciculus cuneatus and in a bundle of fibres of the funiculus rotundus.

4. A narrow tip in Burdach's columns bounding the posterior horn and root, more especially along the anterior half, has escaped degeneration. This strip is more defined in the upper than in the lower part of the cord.

5. A diffuse sclerosis (and much less extensive than in the posterior columns) of the crossed pyramidal tracts, not varying much in intensity, but probably most marked in the dorsal region. This is not traceable higher than the commencement of the crossing of the pyramidal tracts.

6. A diffuse sclerosis of the ascending cerebellar tracts as high as the decussation of the pyramids, and a very slight and irregular sclerosis affecting scattered fibres anterior to these tracts, chiefly along the periphery and in a few sections extending along the anterior fissure.

7. Degeneration of Clarke's columns in some sections.

8. Degeneration of some of the fibres of the posterior nerve-roots, and in some sections of the posterior horns.

9. Friability and shrinkage of the affected areas.

The most noticeable feature in the naked-eye appearance of the cord was its great diminution in size in transverse section, which was as well marked in the cervical and lumbar enlargements as in the dorsal region, the posterior portions being in proportion smaller than the anterior.

There were well-marked symmetrical areas of sclerosis affecting the posterior columns, and, to a less extent, the posterior part of the lateral columns, varying in amount in different parts of the cord. The cord, however, seemed to be much smaller than could be accounted for merely by the sclerosis, and the possibility of the cord being a very small and imperfectly-developed one may be the explanation of its early degeneration.

The parts of the report which are partly reproduced here are both preceded and followed by very interesting comments upon the case reported and also of the cases of this disease which have been reported by other observers.

OBSERVATIONS ON PROGNOSIS.

P. H. Pye-Smith, M. D., in "Observations on Prognosis," says: Of the several departments which make up the art of medicine—observation and detection, foresight, prevention, and remedy—one of the most ancient is the art of prognosis, the forecasting of future events. In the aphorisms of Hippocrates there is more of prognosis than of treatment, and prognosis has a larger share of attention than in any modern work on medicine.

Prognosis, foreknowledge of the future course and event of a disease, has for its objects either to obviate and prevent, or at worst, mitigate, an untoward event, or, on the other hand, to predict a favorable result, and thus to spare a patient a needless attempt at cure (or, as we now more modestly call it, treatment) of his malady, and to furnish him with the most pleasant and not least effectual of remedies—good hope.

Prognosis is based upon diagnosis or thorough knowledge of the disease or

injury in question—of its nature and origin, of the anatomical structures which it changes, of the physiological functions it disturbs, and of the chemistry it perverts. It proceeds upon wide and accurate observation of the course of similar diseases or injuries. It is completed by critical comparison of the natural progress and event of the morbid process with two modifying factors—the state of the individual and the effect of treatment.

We now know the natural course of almost every malady. We know, for example, that stone in the bladder will sooner or later kill; that a strangulated hernia will do so more quickly, though not more certainly; that cataract will not disappear by a *vis medicatrix naturæ* any more than will an ovarian tumor; for before modern treatment made these diseases curable, authentic histories of their results were recorded. We know the average tendency of cholera and enteric fever, because these maladies have been often ill-treated, often un-treated, and are still variously treated. And, thanks to the Anti-Vaccination League, the Contagion Defence Association, the Anti-Mercurialists, and the Teetotalers, we know the natural course and the natural fatality of small-pox, of syphilis, of fevers, and of pneumonia. Thus we can estimate the value of a given plan of treatment by comparing its results, not only with those of other treatment, but also with those of no treatment at all. Happily we are able in many cases to change the natural prognosis entirely, or partially, for the better, if we can insure the intervention of rational therapeutics. With this we are not here concerned. Our inquiry relates to the prognosis of diseases apart from treatment, and especially to the modifications which the general forecast should undergo by consideration of the age, previous illness, and what used to be vaguely called the "constitution" and the "diathesis" of the individual patient.

By the "constitution" or *habitus* of the patient, I mean nothing but what can be stated in exact terms—his birth-place, parentage and race, his height and weight, girth and form of chest, the quantity and quality of his urine, the state of his heart and pulse, of his lungs and bowels, his habits of eating and drinking, his clothing, and his dwelling.

By "diathesis," disposition, proclivity, or tendency—I mean the tendency of intemperance in liquor to produce delirium tremens and cirrhosis, the disposition of rheumatic fever and of erysipelas to return, and of enteric fever to relapse, the proclivity of the children of gouty or phthisical parents to become gouty or consumptive themselves.

Of the two elements of prognosis—knowledge of the habitus, tendency, or natural course of the disease, and knowledge of the circumstances, history, and physiological state of the patient—the former is the fundamental; sure prognosis depends on accurate diagnosis. And it is possible in many instances to form a good forecast without either sight or hearing of the patient. The malignancy of hydrophobia, of carcinoma, of confluent small-pox, the fatal effects of perforation of the bowel, of extensive burns, and of intracranial tumors, admit of no hope, however doubtful, from individual circumstances; even if in some exceptional case, or from some heroic remedy, recovery ensues, it is independent of them.

But this is not true of most diseases and injuries. For example, the prognosis of diabetes, of pneumonia, typhus, compound fractures, lithotomy, is greatly determined by the individual case; so that we cannot gauge the risk of typhus, or diabetes, or lithotomy till we know the patient's age, nor judge of the effects of any operation till we have tested his urine, nor forecast the issue of an acute inflammation till we learn whether he is temperate in the use of liquor. So important is the personal element in prognosis that we may sometimes make more than a shrewd guess as to the event of a disease by observing the

conditions of the patient, even when we are unable to make a satisfactory diagnosis. Hippocratic prognosis was almost entirely of this kind. In the absence of systemic post-mortem examinations, diagnosis, as we now use the term, was impossible. Yet there were certain signs which were recognized as favorable or the reverse. Subsultus tendinum, singultus, convulsions during a fever, were early recognized as being of ill omen. Sleep, returning appetite, a free discharge of urine, were observed to be usually precursors of recovery. Modern science has added little to this kind of prognosis, the power of prediction of an immediate event. Again and again we may see patients suffering from mortal diseases, from internal cancer, advanced phthisis, or cardiac lesions, rally after lying at the point of death, and again and again deceive our expectations. Cases which, it seemed, must end within an hour have lasted for days and weeks, while again and again death comes on suddenly in the midst of apparent improvement, and cases which seemed likely to last for weeks have been cut short in an hour.

The wisest and most experienced are most unwilling to hazard predictions as to time. On this branch of prognosis I have nothing to add. We are dealing in this paper, not with the immediate prospect or the probable duration, but with the ultimate result of diseases.

PROGNOSTIC APHORISMS.

Epidemic diseases are most fatal when first introduced.

Acute diseases following upon chronic are the most dangerous.

A degree of pyrexia, which is of slight importance in a child, is grave in an adult, and imminently perilous in an old man.

Typhus fever is most dangerous to persons who have passed their sixtieth or fiftieth year, less so to infants and those between thirty and fifty-five, and least dangerous to children above five and to young adults.

Small-pox in these particulars closely resembles typhus.

Whooping-cough is dangerous during infancy, and benign after five years of age.

Scarlet fever seldom takes on a malignant form when it attacks adults.

Acute lobar pneumonia has usually a favorable issue in youth and is usually fatal in advanced years.

In young adults pneumonia is rarely fatal unless the patient has disease of the kidneys or of the heart, or is of intemperate habits.

Pneumonia is also a dangerons complication of fevers or acute rheumatism.

Acute lobar pneumonia, when not fatal, leaves the lung uninjuied after recovery and the patient in good health. It is seldom or never followed by phthisis, even when it attacks the apex.

Primary acute pleurisy is not fatal, unless it is accompanied by pericarditis.

Pleurisy, if under treatment it ends in death, is secondary to tubercle or to cancer or to disease of the kidneys.

Œdema of the larynx is very seldom dangerous, œdema of the lungs is usually so.

Acute bronchitis is a frequent cause of death in young children and in old people.

Fatal bronchitis, in persons between ten and sixty years of age, is either capillary or secondary to tubercle.

Phthisis is most pernicious when it is hereditary.

Consumptive patients who lose flesh and color and appetite, with but little signs of disease in the lungs, are in a worse case than those who have marked local symptoms, but whose appetite and nutrition are good.

Hæmoptysis, even when copious, is not always of ill omen.

It is rare for hæmorrhage from either the lungs or the stomach to be immediately fatal, except it proceed from an aneurysm.

Chronic valvular disease of the heart, when it complicates phthisis, does not aggravate the latter, rather it checks its progress.

Sudden death is more frequent from aortic than from mitral lesions, in regurgitant than in obstructive disease of the aortic valves, and in stenosis than in dilatation of the mitral orifice.

Apoplexy, when ingravescent, is commonly fatal.

In apoplectic attacks, the ultimate prognosis depends chiefly upon the degree and continuance of unconsciousness, the immediate prognosis upon the degree in which respiration is affected.

Chronic diseases of the spinal cord are more likely to end favorably in women than in men.

Chorea is only fatal when the patient cannot sleep.

Malignant tumors are more rapidly fatal in the young than in the old. Cancers in the aged are sometimes exceedingly slow in their progress, and may even in rare cases atrophy.

Stone in the kidney may frequently be cured without operation. The opposite is true of stone in the bladder.

Diabetes is rapidly fatal when it occurs in young men, more curable in middle life, and of little danger in later years.

Diarrhœa is dangerous only in infants and in persons above 60 years of age.

CASES OF HÆMORRHAGE.

In cases of hæmorrhage occurring during treatment by salicylate of soda, Lauriston E. Shaw, M. D., says: The discussion on the treatment of acute rheumatism by salicylic acid and its salts, which was opened by the late Dr. Hilton Fagge at the Medical Society in 1881, gave rise to an almost unanimous expression of opinion in its favor; nor has the mass of experience which has since been accumulating by the extensive use of these drugs in any way tended to lessen their popularity.

The theories as to the manner in which the salicylic compounds attack the rheumatic poison are likely to be varied and uncertain whilst the nature of the poison remains unknown, and with the extended experience of the last five years there is still room for doubt as to the actual effect of this drug upon the heart complications of acute rheumatism.

The difficulty in determining this latter point depends upon the variations in the frequency of cardiac affections in the different batches of cases under precisely similar conditions as regards treatment, the variation in such cases being probably partly due to the climatic, social, and hygienic surroundings of the patient. Moreover, the difficulty is added to by the impossibility of properly comparing cases under physicians whose interpretation of slight alteration of cardiac sounds may be so different. Most of us are therefore content to accept the *a priori* conclusion that, as the salicylate lessens the fever and shortens the duration of the disease, it probably diminishes the chance of endocarditis and pericarditis arising.

The toxic effects of these remedies have always been regarded as inconvenient, and by some as an actual bar to their employment. Their most strenuous opponent, Dr. Greenhow, objected to them on account of the serious cardiac depression which he had so often observed. His objections were read before the Clinical Society in 1880, but were treated lightly by most of the physicians who took part in the discussion before alluded to. Among the common toxic symptoms observed have been headache, deafness, tinnitus, vomiting, epistaxis, rashes, and various defects of the heart's action, such as slowness, intermittence, and weakness; and among the rarer, albuminuria, hæmaturia, and temporary amblyopia without retinal change.

In 1881, and since, there have occurred at Guy's Hospital three cases in which hæmorrhage took place (in one case into the retina and in the other two into the urinary tract) during the administration of salicylate of soda, and probably as a direct result of the drug.

He says: By the kindness of Dr.

Pavy, under whose care the cases were treated, I am permitted to put them on record. He then gives the histories of three cases, of which only a summary of each one is here given.

CASE 1. Acute rheumatism; mitral regurgitation; salicylate delirium; epistaxis; retinal hæmorrhage; blindness.

CASE 2. Acute rheumatism; third attack; salicylate treatment; severe delirium; hæmaturia; ecchymosis of pelvis of kidneys and bladder; death.

CASE 3. Enteric fever; administration of salicylate of soda; delirium; hæmaturia; ecchymosis of pelvis of kidneys and bladder; death.

* * * * *

That hæmorrhage in the way of epistaxis is a frequent result of salicylate poisoning there is abundant evidence to prove. In nearly all the abstracts of cases of acute rheumatism treated in this way that have been brought before the societies, this symptom is mentioned as occurring with more or less frequency. How this result is produced is not quite evident, although it is worthy of remark that it occurred in seven of Dr. Greenhow's fifty cases, or in 14 per cent., whereas of the 174 cases at Guy's to which I am about to refer it only occurred in eleven, or about 6.3 per cent. When it is borne in mind that in the former cases "more or less weakening of the pulse, requiring the free administration of stimulants, occurred in nearly every case," and that in the latter this symptom was comparatively rare and was hardly ever considered grave enough to necessitate alcohol, it would appear that the epistaxis, and therefore the other hæmorrhages are directly connected with the depressing effect of the drug on the circulation. Granting that the salicylate compounds given in large enough doses will produce hæmorrhage, it still remains to be considered whether in the above cases the drug was responsible for the accident.

In Case 1, in which the hæmorrhage was into the retina, although I have been unable to find a similar case recorded, there seems little reason to doubt the casual relation of the drug to the hæmorrhage. The furious delirium and bounding pulse, interrupted and temporarily relieved by a severe epistaxis, which recurred, finally passed off and left the boy partially blind, with a well-marked blood-clot covering a portion of his retina, left no doubt in the minds of those who watched the case that the drug was the cause of the accident.

In the second and third cases, in which the hæmorrhage was into the pelvis of the kidney and the bladder, the similarity of the lesions is very striking, and in making the post-mortem on the second case I was at once reminded of the former, which I had seen Dr. Goodhart examine four years before.

Of the few reports of cases dying certainly or doubtfully from the results of salicylate poisoning that I have been able to consult, no mention of such lesion is made. On the other hand, transient hæmaturia has been recorded. Mr. Mllican, at the Medical Society, in 1882, mentioned a case in which purpura and hæmaturia seemed to have resulted from medicinal doses of salicylate of soda. But in this case the patient had previously suffered from "hæmoptysis as vicarious menstruation," which throws some slight doubt on its true importance.

Among the 174 cases before mentioned, besides Case 2, which is included among them, there is another case in which hæmaturia was present for some time, and in which there also occurred epistaxis.

In Case 2 there can be no doubt that the patient suffered severely from the toxic effects of the drug, as shown by the deafness, headache, "peculiar noises" in the ears, and delirium. It is not possible to accurately estimate the quantity of medicine she took, as it was given rather irregularly and now and then stopped on account of the delirium, but it is probable that she took not less than 240 grains of the soda salt and 400 grains of salicine during the

four days she was under treatment. The hæmaturia appeared when she had taken at least three-quarters of the whole amount and at a time when the other poisoning symptoms were most marked. Whether the rheumatic or the salicylic poisons were the cause of death—and there are grounds for the former hypothesis in the severity of the attack and the fact that rheumatism does, though rarely, kill without hyperpyrexia, and without visible pathological lesion—there can be little doubt that it was the latter which caused the lesions in the kidney and bladder.

Case 3, taken by itself, affords much weaker evidence of the relation of the drug to the symptom, but taken in connection with the second it both gives and receives additional weight. Its weakness is twofold—firstly, in that the symptoms of poisoning, headache, vomiting, and delirium, which are mentioned in the report, were already present on admission as a result of the typhoid from which she was suffering; secondly, in that hæmaturia is by no means uncommon in typhoid fever.

With reference to the first point it should be noticed that the salicylate was early changed to a salicine, a pretty certain indication that the physician or house physician who ordered the change considered that the patient was suffering from salicylism. The patient, moreover, received fairly large quantities of the drugs, *i. e.*, at least 60 grains of the soda salt and 480 grains of salicine in five consecutive days.

With reference to the second point, in nearly all cases in which typhoid proves fatal when complicated with hæmaturia it is found that the hæmorrhage is due to a general nephritis, and not to the condition of ecchymosis which bears so marked a resemblance to Case 2. There is little doubt that the patient succumbed to the typhoid fever, and as to the extravasations of blood one cannot perhaps say more than that they probably resulted from salicine.

Those physicians who are inclined to look upon the toxic effects of salicine as mere inconveniences, which are not to be considered beside the great advantages obtained in combating the rheumatic poison, would not look with indifference upon such accidents as are above described. But they are very rare and should no more deprive us of the use of this powerful weapon than do the accidents that happen in the administration of anæsthetics. They should perhaps suggest caution in pushing the drug beyond its physiological extent, of which we get early warning in the deafness and headache which occur.

It has been suggested that the poisonous symptoms are due to some bye-products in the synthetic preparation of salicylate of soda, and that they therefore would not occur during the administration of natural salicine or salicylic acid. But as the soda salt is more active in producing toxic symptoms, so is it more powerful in relieving the rheumatic pains and reducing the temperature, and at Guy's, at least, the soda salt is almost exclusively used, except in cases in which there seems to be some undue sensitiveness to the drug, when salicine is substituted.

It does not, therefore, seem likely at present that the first place will be given to the natural drug, nor, as I shall presently show, did improved methods of manufacture of the synthetic drug, if such improvements there have been, make it less active in producing the more common symptoms in 1886 than it was in 1881.

In looking through the cases of acute rheumatism occurring at Guy's in the years 1881 to 1886, inclusive, for evidence of similar accidents to those which form the subject of this paper, I have tabulated, for the sake of comparison, the results in the way of toxic symptoms in the cases in the first and last years. Every case of acute rheumatism of which the report is sufficiently full to estimate the dose of medicine is included. In so many cases both salicylate of soda and salicine were given, and in so few was salicine only given, that no attempt has been made to separate the results of

the two drugs. All cases in which no mention of any toxic symptoms is made have been considered as not presenting them, although the fact that in many such cases salicine was early substituted for the soda salt suggests that such symptoms were present but not noticed by the clerk; but the unavoidable error due to this want of observation is likely to have been as great in one year as the other.

In both years the soda salt was much the greater favorite, there being only five or six cases in each year in which salicine only was given throughout the treatment. The dose has not practically changed, the commonest dose to begin with being in both years twenty grains every three hours. The soda salt used in both years was, as it has always been at Guy's, that artificially prepared by a patent process in Germany and received at the hospital in the original jars.

In 1881 there were 102 available cases, and in 1886 seventy-two.

The following table shows the relative frequency of the common toxic effects.

	1886.		1881.
	Cases.	Per Cent.	Cases.
No toxic effects mentioned.	23	32	40
Toxic effects	49	68	62
Delirium	12	16	21
Deafness	28	38	33
Vomiting	17	23	15
Tinnitus	13	18	16
Headache	21	29	12
Epistaxis	5	6	6
Irregular or slow pulse	9	12	4
Albuminuria	2	—	4
Hæmaturia	1	—	1
Retinal Hæmorrhage	—	—	1
Urticaria	—	—	1

The frequency of occurrence of the various symptoms in the seventy-two cases in 1886, has been reduced to percentages in order to the better compare them with the 102 cases in 1881.

The most notable differences are in delirium, which is about 5 per cent. less frequent, and in vomiting, which is about 8 per cent. more frequent in the latter than in the former year. Headache and alterations in the pulse, which are both much more frequent, the one 17 and the other 8 per cent., are of less importance on account of the many possible causes other than the medicine which might be responsible for their occurrence, and also because they are symptoms which could more likely be omitted by the clerk.

The main fact which the table shows is that whatever alteration may have taken place in the drug or its method of administration, the chief toxic symptoms are as common now as when it was first introduced, and whatever danger there may be of such accidents as have been related is as great now as it ever was.

ANO-VESICAL CENTRE.

A correspondent of the *Medical Press and Circular* writing from Vienna, says: At the last meeting of the Imperial and Royal Medical Society of Vienna Professor Rosenthal delivered an interesting lecture on the Ano-vesical Centre. It was known that the commencement of severe disease of the spinal cord was often preceded by paralysis of the sphincters of the bladder and the rectum. From this fact it was to be inferred with some probability that the centre of these organs was to be sought for in the spinal cord, though physiologists were not yet of the same opinion. Irritation of the spinal cord produced contractions in the bladder, and according to Budge the mechanism of the discharge from the bladder was a reflectoric one, and the course of the reflective act was to be explained in such a way that the sensible nerve fibres represented the centripetal parts, and the motory nerves the centrifugal parts of the reflective organ. This mechanism was furthermore dominated by nerve fibres from the brain to the spinal cord. Professor Rosenthal here referred to the contradictory statements of different authors as to the exact seat of the reflective centre in question. Some authors stated that the seat of this centre was below the lumbar plexus, others above it. This difference of opinions was

to be explained by the fact that uncomplicated cases of this class were of a great rarity. Quincke, basing himself on the experiments which he had conducted together with Kirchhoff, and in which the spinal cord was compressed owing to fracture of the first lumbar vertebra, stated that the centre was to be sought for in the so-called sacral nucleus of Stilling. The lecturer gave an account of a patient under his treatment, in whom the disease had supervened, four years ago, owing to a severe chill; anæsthesia of the lower parts of the buttocks, the perinæum, the external and internal sexual organs, the urethra, and the bladder, and complete paralysis of the bladder and rectum were first noticed. Contraction could neither in a reflective way nor by voluntary impulse be produced. The reflective centre of the bladder and its connection with the brain had, therefore, been destroyed. When the effect of the anæsthesia in the present case was taken into consideration, it became evident that it was quite identical with the region which Luschka had described as the pelvic division. These branches derived their origin from the inferior sacral nerves, and, moreover, conducted the motory nerves for the whole uro-genitary system. As no trace of paralysis or anæsthesia of the lower extremity was present in the patient, the lumbar spinal cord could not be affected; the seat of the affection was, therefore, to be sought for in the cone of the spinal cord. An affection of the sacral plexus, where the nerves already contained mixed fibres, was also to be excluded, owing to the want of motory appearances.

This case, which had been observed by the lecturer, together with those which had been observed by Kirchhoff, admitted of the conclusion that the ano-vesical centre was situated in the "conus terminalis" of the spinal cord.

Professor Rosenthal furthermore made some remarks on the therapy of this disease, and pointed out that the internal remedies, such as ergotine, strychnine, etc., were of no value, and that much better results were obtained by hydro-therapeutic procedures, such as "douches" on the sacral bone, and so on. He, moreover, recommended a better method of electrification, which consisted in the fact that the "anode" of the galvanic current was applied to the nape, and the "cathode" on the superior part of the sacral bone, the current being repeatedly changed ("reversed"). In this way distinct contractions of the bladder were already obtained with a proportionately slight intensity of the electric current.

In the discussion which arose on the subject Dr. Teleky directed attention to the fact that, in old people, isolated paralysis of the bladder might also occur, and that he just now had such a case under treatment.

Professor Rosenthal replied that these isolated paralyses were always to be explained by a peripheral cause.

Dr. Fellner confirmed by his own experiences the statements of Professor Rosenthal.

Professor von Dittel was also of the opinion that most of the isolated paralyses of the bladder in old people were of a peripheral character, and that they consisted in atrophic disturbance of the muscles of the bladder.

BRAIN SURGERY.

Since Molius trepanned Prince Rupert's skull, brain surgery has always had a fascination for English surgeons. No doubt many timorous members of the craft of surgery from time to time protest against and prophecy evil of trephining, particularly so when the operation is intended merely as a preliminary to a more serious step. Percival Pott tells us how in his day a simple puncturing of the great longitudinal sinus, which was productive of the happiest effects, brought upon him many and grave censures. Yet Pott's example was not lost; our great Irish surgeon, O'Halloran, became noted for his daring and success in brain surgery, and later still, Guillaume Dupuytren

shocked the timorous and encouraged the thoughtful by evacuating a cerebral abscess. Nevertheless, brain surgery became a forbidden thing, not because there was extreme diffiulty in its being done, nor from want of success in its performance, but because of the incongruous admixture of theology with surgery, and the delimitation of the cerebral structure from the domain of surgery—it being the soul centre. And although broken skulls had allowed cerebral matter to protrude, and when protruded the objection to surgical interference was not urged, still, for a surgeon to contemplate opening the sacred inclosure of the skull with a trephine for the purpose of evacuating diseased products was condemned, though a brickbat might smash the skull, and healthy brain tissue be extruded and excised without anything like the same shock to public sensitiveness. The fact that from time immemorial a cleric had with a sharp stone scraped a hole in children's skulls to liberate the demon that caused the convulsion which to-day we ascribe usually to teething, was either forgotten or explained away as part of a religious ceremony now happily discontinued. Nevertheless, medicine in the face of all these difficulties made progress. The observation that the brain was liable to disease and that nerve tissue was as directly subject to material injuries gradually gained acceptance. Pressure as from a blood-clot was found to as completely stay its functional activity as it would that of the lung, and purulent collections were found to influence it both by pressure effects and inflammatory effects much as they do other tissues. More careful examinations of the cerebral lesions soon detected the fact that pressure in certain regions was found associated with distinct symptoms. Notably the effect produced by pressure on the internal gyration of the left frontal lobe. Everything was telling of a young generation's dissatisfaction with the "rest and be thankful" of their immediate predecessors, and when Dr. Ferrier's experiments told that the obscurity which enveloped psychology was to terminate in the brilliancy of natural light the thoughtful truthseekers rejoiced that man's intelligence had at last enabled him to contend with a hope of success against diseases which, by attacking his organ of mind, had deprived him of his prerogative of the "thinking" faculty, and reduced him to the level of the brute. To Mr. Horsley is fairly due the credit of first practically demonstrating the utility of Dr. Ferrier's experiments, and as might be naturally expected his example soon found many followers. Even the merest beginner was anxious to try his success in this new domain that medicine had reclaimed. The topography of the cerebrum became the most fascinating of studies, and the localization of the functions of thought and intellectual expression now were counted as fairly within the physiologist's domain, and as a consequence demanded the therapeutist's and the surgeon's study. Beaconsfield's maxim, however, holds good, and the case that recently occupied the Medical Section of the Royal Academy of Medicine, Ireland, about which there has been so much discussion in our columns, exemplifies it. We cannot, however, expect men trained in the past to devote the same care to the study of newly developed sciences that they did in their student days, nor is it reasonable to expect that they could divest themselves of the bias of their early training. Still, in a rapidly progressive science like surgery, dependence on the rejected formula of a dead past can bring nothing but failure.—*Medical Press and Circular*.

A CASE OF URÆMIC CONVULSIONS SUCCESSFULLY TREATED BY PILOCARPINE.

Dr. W. J. F. CHURCHOUSE in the *British Medical Journal* says: J. M., aged 21, fell ill with scarlet fever on October 13. He went on well until November 3, when symptoms of nephritis showed themselves;

the attack was slight, and appeared to improve rapidly under treatment.

On November 10 I found him in uræmic convulsions; the fits occurred every few minutes. My friend Mr. Cox saw him with me, and with his concurrence, I injected one-third of a grain of pilocarpine into the front of the forearm; the patient soon began to sweat profusely, and the convulsions gradually diminished both in force and frequency; they recurred in the early part of the night about every fifteen or twenty minutes, but with longer intervals towards morning; at 8.30 a. m. I repeated the pilocarpine, and the intervals between the convulsions became still longer; in the afternoon, when he became sensible enough to swallow, I gave him one-third of a grain of elaterium; this acted freely, and he probably passed a little urine at the same time, otherwise he had passed none since 7 or 8 the previous evening; as the convulsions still recurred at frequent though longer intervals, I again injected one-third of a grain of pilocarpine at 9.30 p. m. During the night he had a few slight fits, and in the morning about 11 a. m., I gave him another injection of pilocarpine, and the last fit occurred about 4 p. m. on that day. In the evening I again gave him one-third of a grain of elaterium, which acted freely, and he now passed more urine, the urine having been very scant up to this time.

On November 15 he had symptoms of more convulsions coming on, but I gave him another injection of pilocarpine, and this passed off.

He lay in a semi-comatose condition from November 12 to 17, swallowing what was put in his mouth, but totally unconscious of everything going on around him, and taking no notice of anything; on November 17 he was maniacal, and on November 20 he could not be kept in bed. During the whole of this time the bowels had been kept open by occasional doses of elaterium, and he had taken a mixture containing liq. ferri perchlor. and liq. ammon. acetas. On November 22 he became sensible and talked rationally, but had no recollection of anything that had occurred since November 10; on November 25, for the first time since the commencement of his illness, there was no trace of albumen, and he improved rapidly; on November 28 he got up and dressed, and from that time made a good recovery, and is now again following his trade as a shoemaker.

I think we have in pilocarpine a most prompt and valuable diaphoretic.

THE ACTION OF NAPHTHALINE ON THE VISUAL ORGANS.

According to some recent experiments the ingestion of napthaline produces marked lesions of the retina, the optic nerve, the vitreous humor, and the crystalline lens, in guinea pigs. On the retina its administration is followed by small patches of a brilliant white, which rapidly increase in size and coalesce, principally in the neighborhood of the optic nerve. In large doses the retina is rapidly destroyed. In the vitreous humor a number of opalescent opacities appear, not unlike cholesterin. The most curious effects are those observable in the crystalline lens; the appearance of the white spots is preceded by shaded lines, followed by the formation of opacities either on the posterior surface or round the edge immediately beneath the capsule. In a few days the lens will have become quite opaque. The histological examination shows that these patches are due to an exudation of round cells beneath the capsule and between the peripheral fibres of the lens.—*Medical Press and Circular.*

BOOK-REVIEWS.

GYNÆCOLOGICAL DIAGNOSIS, GENERAL GYNÆCOLOGICAL THERAPEUTICS, by R. CHROBAK, M. D.; and ELECTRICITY IN GYNÆCOLOGY AND OBSTETRICS, by EGBERT H. GRANDIN, M. D.—Comprising Vol. V, of the Cyclopædia of Obstetrics and Gynæcology. New York: William Wood & Company. 1887. Chicago: W. T. Keener.

The editor frequently refers to "the general practitioner" in a manner which leads one to infer that this volume is intended especially for his guidance. It will be most useful to that class of physicians, but some others may also find its pages more than simply interesting reading. The Vienna author has succeeded very well in limiting his discussion to the subjects implied by the title, and the style of treatment is characteristically encyclopædic.

The second part of the volume will probably be the most useful, since what it contains is not unknown to those doctors who are diligent readers of current medical literature. The subject-matter will be new to many of the subscribers to the Library. Physicians who are unfamiliar with the use of electricity in gynæcological and obstetrical practice will be surprised by the statements in this volume, and highly gratified if they will make intelligent attempts to verify them. The author clearly recognizes and frankly admits that electricity is still used largely empirically in this field, and he is to be congratulated in having made a most excellent résumé of the present knowledge of its usefulness and of the methods of its application. E. W.

DISEASES OF THE OVARIES. By DR. R. OHLSHAUSEN. Edited by EGBERT H. GRANDIN, M. D. Volume VIII, of the Cyclopædia of Obstetrics and Gynæcology. Pp. v and 414. New York: William Wood & Company. Chicago: W. T. Keener. 1887.

Any expectations in regard to the probable thorough and satisfactory character of this volume in the *Cyclopædia*, based upon the reputation of its distinguished author, must be considered as having been fully met in this book. It is, of course, impossible for a treatise on a subject in which so much active and accurate work is being done as in the field of surgery of which this book treats, to do more than report the history, pathology, diagnosis, and treatment up to the date of its publication, and he will be a carping critic who fails to find in this book a careful, accurate, and intelligent résumé of the present knowledge of the subject.

Since upon its successful performance so much depends, general interest will centre upon what is said of the operation for extirpation of the ovaries. The credit of the first operation is given to Ephraim McDowell, of Kentucky, performed in 1809. Nathan Smith, of Connecticut, was the next operator, and his first case, in ignorance of McDowell's work, was performed in 1821. The first English operation was by Lizars, in 1824; the first German by Chrysmar, about 1820; the first French by Woyerkowsky, in 1844. The author thinks that the most decisive advance in the history of ovariotomy was made by Spencer Wells, and he links with his name those of Washington Atlee, Keith, Baker Brown, and Kœberlé. As specimens of the author's opinions upon important, and as yet perhaps unsettled points, the following quotations may be of interest here:

"With strict antisepsis, at all events, the length of the incision exerts no notable influence upon the result of the operation." "I must earnestly protest against flooding the peritoneum with large amounts of fluid. * * * * * I have so often observed symptoms of shock immediately after irrigation with a watery solution or thymol (1–10 per cent.) that the connection between the irrigation and the shock is undoubted. Some of these patients did not recover from the collapse, and I am decidedly of the opinion that I have repeatedly lost patients as the result of these irrigations." "There are only two difficulties which occasionally prove insuperable:

"1. The extension of a malignant neoplasm of the ovary to adjacent tissues and organs.

"2. Sub-serous development of the tumor in its most aggravated form.

"On the other hand I recommend, when a larger or smaller portion of the tumor must be left behind, that it be simply replaced in the abdominal cavity and the latter completely closed. Even if the tumor, many of whose cysts have been opened, now communicates freely with the abdominal cavity, and the whole condition presents a filthy appearance, nevertheless there is no danger of sepsis or peritonitis if the operation is performed antisceptially." E. W.

STERILITY; DEVELOPMENTAL ANOMALIES OF THE UTERUS, by P. MÜLLER, M. D.; and THE MENOPAUSE, by E. BÖRNER, M. D. Edited by EGBERT H. GRANDIN, M. D. Vol. XI, of the Cyclopædia of Obstetrics and Gynæcology. New York: William Wood & Company. 1887. Chicago: W. T. Keenen.

The impression which this title produces is that the volume has the least practical value of any in the series. Whether this proves true for individual readers will depend largely upon the nature of their work. There is, however, an agreeable surprise in store for those who will take the trouble to read the book. The first part, that on Sterility, is treated with characteristic German thoroughness, and contains about everything either of value or of interest known to the profession.

The author of the part treating of the Menopause states that he has endeavored to make the treatise of practical value to physicians, and claims that he has had exceptional facilities for the study of his subject.

HANDBOOK OF PRACTICAL MEDICINE. By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the University Medical Clinic in Zurich. Volume IV. Diseases of the Blood and Nutrition and Infectious Diseases. Seventy-four wood engravings. Volume IV of Wood's Medical Library for 1886. New York: William Wood & Company. Chicago: W. T. Keener.

The translator's work of the final volume of Professor Eichhorst's valuable work on practical medicine has been as well done as that of the preceding volumes. Professor Eichhorst's work is too well known to need praise here. The fortunate possessor of this Practice of Medicine will thoroughly appreciate it, and thank the publishers for placing it within the reach of American physicians. F. B.

DISEASES OF THE TUBES, LIGAMENTS, PELVIC PERITONEUM AND PELVIC CELLULAR TISSUE; Extra-Uterine Pregnancy, by L. BANDL, M. D.; and DISEASES OF THE EXTERNAL FEMALE GENITALS; LACERATIONS OF THE PERINEUM, by P. ZWEIFEL, M. D. Edited by E. H. GRANDIN, M. D. Volume XII, of the Cyclopædia of Obstetrics and Gynæcology. New York: William Wood & Company. 1887. Chicago: W. T. Keener.

This volume, which closes the series, calls for no special comment beyond the statement that it is no less admirable than the other numbers of the Cyclopædia, and the few remarks appropriate in this connection may relate to the publication as a whole. The first four volumes, those which comprise the translation of Charpentier's Obstetrics, are perhaps the most important of the series, as this is beyond question the most complete treatise upon the subject. The fact is so striking and unquestionable that attention is again called to the greatly enhanced value which the editorial insertions give this part of the series. This occurs for two reasons: 1, the original is unfair in its treatment of German views; and, 2, upon many disputed points in the practice of obstetrics the opinions which may be here classed as the *not-French*, are both entitled to a fairer consideration than the author gives them, and are practically superior. The editorial treatment of these two points leaves little to be desired.

The merit of the several volumes of the Cyclopædia is very uniform, and the interest which they possess for the profession at large will vary much more with the particular subject discussed and with the eminence of the author than by reason of the special ability and thoroughness of the discussion. Gynæcology is undergoing such rapid development that a treatise of this kind must soon cease to represent the best opinions upon many topics, but the work is truly cyclopædic and a credit to the publishers. The great merit of the work, together with the very low price at which it is sold, will certainly insure a very large sale.

The only serious fault, the defective illustrations of the earlier numbers, can be easily corrected in the new editions, many of which ought to be called for. E. W.

A PRACTICAL TREATISE ON RENAL DISEASES AND URINARY ANALYSIS. By WILLIAM HENRY PORTER, M. D., Professor of Clinical Medicine and Pathology in the New York Post-Graduate Medical School and Hospital; Curator to the Presbyterian Hospital. One Vol.; 360 pages, 100 illustrations. New York: William Wood & Co. Chicago: W. T. Keener.

Professor Porter presents, in his book, diseases of the kidneys studied chiefly from a clinical and pathological point of view. To this end, preceding inflammatory diseases, is a brief résumé of the anatomy and physiology of the kidneys, which gives the reader a clear understanding of the various lesions and pathological conditions described under the various diseases of the kidneys.

Under the head of Bright's Diseases the author treats of the parenchymatous degenerations, acute and chronic, attending high temperature, infectious diseases, pregnancy, etc.; the lesions that occur in diabetes mellitus; gouty kidney; amyloid transformation, and the usual forms of acute and chronic inflammation of the kidney. Most clinicians and pathologists will disagree with him on the free use of the term. This is, however, of small importance. The diseases classed as Bright's Diseases are treated of separately and in language clear and concise, giving the pathology, the anatomical changes (gross and microscopical), the symptomatology, and the treatment consistent with modern investigation and thought. An excellent diagnostic table of Bright's Diseases is given on p. 104. A separate chapter is devoted to diabetes mellitus, and the subject is thoroughly and ably handled.

Part second is chiefly devoted to urinary analysis, chemical and microscopical.

The illustrations are all good, many of them made especially for the author. The book is a valuable addition to medical literature, and will prove an instructive companion to the practitioner and student.

The book is printed on excellent paper with large, clear type. F. B.

ON THE WASTING DISEASES OF INFANTS AND CHILDREN. By EUSTACE SMITH, M. D. Pp. xx and 380. Fifth edition. Philadelphia: P. Blakiston, Son & Company. 1888. Chicago: W. T. Keener.

The author states in the preface to this edition that the text has been revised, and many alterations and additions have been made. His reputation is so unquestionably established as an authority upon questions regarding the diseases of early life, that it goes without saying, that this is, as he intends it to be, a safe guide. It is also eminently practical, and a very desirable book to own.

MISCELLANEOUS.

IMPORT DUTIES ON SURGICAL INSTRUMENTS.

At the annual meeting of the Georgia Medical Society, held January 3, 1888, the following resolution was unanimously carried:

Resolved, That the Corresponding Secretary enter into correspondence with the medical journals of the country, in order to enlist their influence in support of the movement to remove the import duties from all medical and surgical instruments and appliances, including those used in the diagnosis as well as treatment of disease, so that they may be furnished to those needing them at the lowest possible price.

In compliance with the above resolution, I wish to solicit your earnest attention, and a notice in your publication, which will claim the attention of your readers, hoping that your country readers, especially, will appreciate the truth and importance of our proceedings.

Perhaps the statement of a few facts will assist the reader in realizing the extent of the grievance, and the justice of the plea for which we ask co-operation.

1. Physicians are at the mercy of instrument makers in regard to price, make, and quality of finish, because of the lack of sufficient competition.

2. The price of instruments made in this country is out of proportion to that paid for similar instruments on the Continent of Europe.

3. Surgical instruments and appliances are so costly that but few doctors entering the profession can provide themselves with an outfit adequate to carry on a general practice. At present prices, it is impossible for a country physician's income to sustain his investing in costly instruments, and as a result, many simple cases, such as retention of urine, foreign bodies in nose or throat, deep-seated abscesses, etc., all of which could be relieved at once with the proper instruments, must either die from the immediate cause, or from the effects of time lost in seeking skillful manipulation, or else they are frequently crippled and disfigured, because the most intelligent help, though patiently given, is itself crippled for want of proper instruments.

4. The cheaper grades of instruments are either antiquated, or so poorly made that they may prove a cause of failure in operations, sapping, as it were, the natural inclinations to surgery in its inception.

5. European instruments are from 25 to 75 per cent. cheaper than ours, and their introduction into the market will enable the mass of doctors to buy those of prime necessity, will bring down the price of home-made appliances, and oblige the makers to use good material, and put a better finish to their work.

6. The removal of import duties on surgical and other instruments used by the profession, and on medicines in general, will produce the same results as we all know it did on the article of quinine.

THE WILLIAM F. JENKS MEMORIAL PRIZE.

The first triennial prize, of two hundred and fifty dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Diagnosis and Treatment of Extra-uterine Pregnancy."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children"; and that "the trust see, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may in their judgment be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said

essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., addressed to Ellwood Wilson, M. D., Chairman of the William F. Jenks Prize Committee, before January 1, 1889.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if no essay submitted is considered worthy of the prize.

LANOLIN.—Since Professor Liebreich extracted oil from sheep's wool and designated it lanolin—wool-oil—it has to a great extent supplanted the petroleum products called vaseline and cosmoline as a basis for ointments in dermatology, because of its ready absorption by the skin. Where a simple lubricating substance is required vaseline and cosmoline answer very well, but where absorption is desired they are less valuable than wool-oil. It is claimed that the objectionable wool-odor which characterized the first preparation of lanolin, can now be obviated without impairing the other qualities of lanolin. Various toilet articles are prepared with lanolin, and designated by such names as *lanolin cold cream*, *lanolin toilet soap*, *lanolin pomade*, etc., etc. As is usual special claims are made for them, by their manufacturers, of possessing exceptional virtues. A substance called *agnine*, which is supposed to be only another name for wool-oil, is also sold.

RUSH MEDICAL COLLEGE.—The forty-fifth annual commencement exercises of Rush Medical College, the Medical Department of the Lake Forest University, were held on February 21st. The graduating class numbered 132.

The following is the list of the graduates:

Barnes, Allen C.	Lange, Ignatz
Barnes, Edgar Cole	Larson, Carl Frithiof
Beeson, Job Strother	Lee, Maskel
Benz, Henry Andrew	Loughridge, Victor E.
Best, Elmer Howard	Lovell, Frank Blair
Bir sall, George Asa	Marston Ernest L.
Blim, Charles	Martin, William Brown
Bluthardt, Oscar Robert	Martin, William Giles
Boswell, Davis	Mattox, William R.
Bowlby, Geo. Balfour	Maxwell, George B.
Brasington, E.C., M.D.	May, James Wallace
Brown, Martin Millard	McClelland, Clarence B.
Cantrell, Thomas D.	McCorkle, George Earl
Carman, Frank W.	McGauran, Michael S.
Carr, Andrew	McGrath, John Joseph
Casey, Joseph M.	Meath, Augustus H.
Cauble, Willis Benton	Moeller, John
Cavett, Robert Wm.	Montgomery, Frank H.
Challoner, Robert	Moore, Charles Fred
Chance, Norman W.	Munger, Clifton Deo
Cherrie, Martin B.	Murphy, Edward A.
Collins, Wm. P., B. S.	Nelson, Herbert H.
Conaway, John D.	Noble, Wm. L., B. S.
Corley, Charles J.	O'Malley, Michael Paul
Dearborn, Henry J.	Owsley, Frederick D.
Defrees, Henry J.	Perekhan, John Said
Derham, James E.	Phillips, Carl Fremont
Detweiler, Edwin S.	Phillips, George S.
Dolph, Cassius M.	Pitman, Samuel M.
Doolittle, John Comber	Power, Howard L.
Doty, Charles Willard	Quirk, John Joseph
Dove, Joseph D. F.	Rahlfs, Theodore
Ehle, Hiram Barber	Rawlins, John Aaron
Emerson, Wm. Jesse	Reece, James Nelson
Fell, Joshua Harlan	Reynish, D. J., B. S.
Garber, F. W., B. S.	Rick, Joseph B.
Gaston, James B.	Ring, John
Ge tch, Ernst A.	Richardson, John F.
Goddard, James Bell	Saint Cyr, Emi en D.
Goit, Edgar Grant	Sattra, Ole Magneson.
Goodner, Ralph A.	Schoenneshoefer, W.
Grant, Geo. Herbert	Schubert, John J.
Halloran, Florence J.	Schwandt, Emil J.
Hamill, Edwin	Seehuus, Ole Martin
Hanna, Harry Howard	Shambaugh, Levi D.
Hanson, Frank	Sherwood, Francis R.
Harms, Henry	Sims, Luther M.
Heidner, Gustav Adolph	Smith, J. M., M. D.
Herrick, J. B., A. B.	Stafford, E. A., A. B.
Herrmann, Arthur John	Steele, Corwin James
Hill, Thomas Caldwell	Stockwell, John S.
Hoover, Walker Karl	Strickland, C. O., B. S.
Hontz, William Cyrus	Taylor, Fred L.
Howard, Edmund J.	Taylor, John Dan
Huberti, Joseph	Thomas, Charles D.
Hughes, Albert L.	Titus, William H.
Iles, Urban Grant	Trask, Howard P.
Ingalis, Francis Marion	Vaughn, Phillips C.
Innis, James Harvey	Werner, Henry
Irwin, George Howard	Wieland, Frank W.
Jespersen, Thomas	Wilcox, Collin H.
Jones, Richard R.	Wiley, Frank A.
Jurgens, Ludwig W.	Wittman, Adolph R.
Kirkpatrick, John W.	Wittwer, Herman R.
Kratochvil, George	Yates, George F.
Lane, Herbert Warren	Yohe, Alfred F.

PROPOSED LARYNGOLOGICAL SOCIETY.—A new society is in course of organization in London, as a sequel to the resolution passed by the Subsection of Laryngology

and Rhinology at the Dublin meeting of the British Medical Association. The Chairman, Dr. W. McNeill Whistler, in his opening address on that occasion, dwelt strongly on the advantages that such a society would afford to workers in these special branches, who at present have no means of bringing their results to the test of direct criticism by competent judges, except at the annual meetings of the association. It was decided that steps should be taken to carry Dr. Whistler's suggestion into effect, and Dr. R. A. Hayes, of Dublin, was intrusted with the duty of making the necessary arrangements. The list of original members already comprises about fifty names, which include those of nearly all of the prominent laryngologists in the three kingdoms. The following gentlemen have signified their intention of joining the society: Sir Morell Mackenzie, Dr. Whipham, Dr. E. Woakes, Dr. Prosser James, Dr. A. Orwin, Dr. Coleman Jewell, Dr. Greville Macdonald, Dr. Dundas Grant, and Messrs. Lennox Browne, Carmalt Jones, George Stoker, W. R. H. Stewart, and Percy Jakins, of London; Mr. C. Warden, of Birmingham; Dr. Ward Cousins, of Portsmouth; Mr. Creswell Baber, of Brighton; Dr. P. McBride and Dr. G. Hunter Mackenzie, of Edinburgh; Dr. T. Barr, of Glasgow; Dr. Philip Smyly, and Messrs. Kendal Franks, Thornley Stoker, and J. B. Storey, of Dublin; Dr. Walton Browne, of Belfast; and Dr. A. Sandford, of Cork.

UNMERITED SYPHILIS.—M. Fournier, in a recent communication, has set forth the statistics which he has taken the trouble to collect of "unmerited" cases of syphilis. In 842 out of 887 infected women, the disease was of venereal origin, leaving 45 who had contracted it in some other way. On analyzing the latter group he found that in seven the disease was hereditary; four had contracted it accidentally in infancy; eight were wet-nurses who had been infected by syphilitic infants; five were midwives who had caught it in the practice of their profession; twenty-two were cases of "domestic infection," either from nurse to child or *vice versa*, or from diseased servants; two of vaccinal syphilis; two in which the infection was conveyed in catheterizing the Eustachian tube; one consequent on rape; and finally four of unknown origin, but certainly independent of sexual contamination. With respect to the first group of 842 infected women, 366 were "gay" women; 220 were married women, and 256 were of "doubtful" social status. Of the married women no fewer than 164 had taken the disease from their husbands. In view of these figures, M. Fournier maintains that the doctrine which forbids discrimination between the different groups of sufferers is one to be unhesitatingly condemned.—*British Medical Journal.*

THE DISCIPLINARY POWERS OF THE ROYAL COLLEGE OF PHYSICIANS.—It is stated that at the next meeting of the Comitia of the Royal College of Physicians of London, a resolution will be moved by the Senior Censor requiring that no Fellow, Member, or Licentiate should contribute articles on professional subjects to journals professing to supply medical knowledge to the general public, or should in any way advertise himself or permit himself to be advertised in such journals.

THE AMERICAN ANTHROPOLOGIST, a new quarterly journal, published under the auspices of the ANTHROPOLOGICAL SOCIETY OF WASHINGTON, has just been issued. It is edited by a committee consisting of seven members. If the initial number be a fair index of what its future is to be, it will be a creditable addition to the periodical literature of our country.

ANNOUNCEMENTS.

THE AMERICAN MEDICAL ASSOCIATION.—The next meeting of the Association will be held in Cincinnati, on the first Tuesday in May.

ILLINOIS STATE MEDICAL SOCIETY.—The next annual meeting of the Illinois State Medical Society will occur at Rock Island, on the third Tuesday in May.

THE German Society of Naturalists and Physicians, will hold its next annual meeting, in Cologne, in September, 1888.

AN International Exhibition of Hygiene is to be held in Ostend, Belgium, beginning on June 1, 1888.

THE FOURTH INTERNATIONAL OTOLOGICAL CONGRESS.—The Fourth International Otological Congress will be held in Brussels, Belgium, September 10–16, 1888. The President of the Congress will be Dr. C. Delstauche, and the Secretary, Dr. C. Goris, both of Brussels. It is requested that the titles of papers to be read at the Congress be furnished to the Secretary prior to May 15.

B. LANGENBECK, M. D.